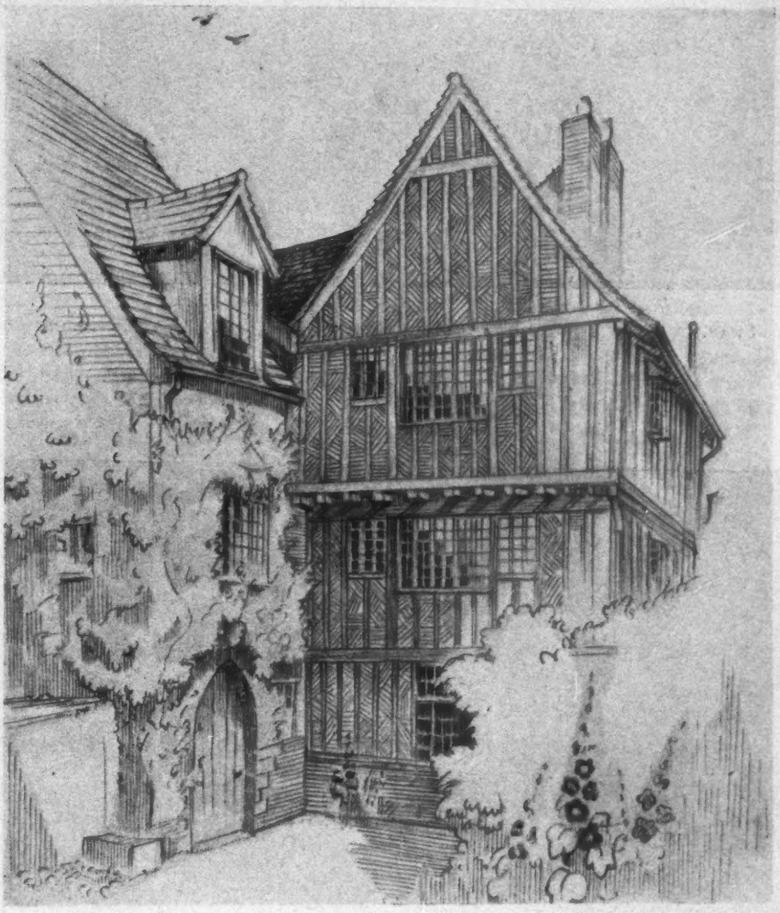
THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLI. DECEMBER 4, 1931. No. 4635.



Beeleigh Abbey, Maldon: Tudor Wing.

From a pencil sketch by Mr. E. A. W. Ixer.

MEETINGS

SATURDAY, *December* 5.

Architectural Association. Dr. Raymond Unwin on "Planning the Town." 3 p.m.

Association of Architects, Surveyors and Technical Assistants. Visit to Carpenters' Hall, E.C.2. 2.30 p.m.

London Association of Builders' Foremen and Clerks of Works. Annual Dinner. First Avenue Hotel, W.C.1. 6.30 p.m.

MONDAY, *December* 7.

Institution of Electrical Engineers. Discussion, "Improving the Reliability of Domestic Electrical Equipment." 7 p.m.

Society of Engineers. Mr. J. R. Paris on "Reinforced Concrete Cylinder Bridge Foundations, Masonry Piers, in East Africa, for the Mapuka Causeway." 6 p.m.

MONDAY-THURSDAY, *December* 7-10.

London Housing Societies. Housing Exhibition. At the Central Hall, Westminster.

TUESDAY, *December* 8.

South London Art Gallery Lecture. Mr. Percy Lovell on "The Bridges of London." At Peckham-road, S.E. 7.45 p.m.

Institution of Electrical Engineers (Scottish Centre). Mr. R. Grierson on "The Electrical Heating of Buildings." At Glasgow. 7.30 p.m.

WEDNESDAY, *December* 9.

Royal Society of Arts. Sir Henry Maybury on "Roads and Road Transport." 8.30 p.m.

Manchester Society of Architects. Mrs. Edward Maufe on "The Furnishing of Modern Buildings." 8 p.m.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "French Renaissance (1450-1900)." 6 p.m.

Institution of Structural Engineers. Mr. A. Hiley on "Considerations on Foundation Problems associated with Pile Driving." At Manchester. 6.45 p.m.

Architecture Club. Dinner, Savoy Hotel, W.C.2. 7.30 p.m.

Liverpool Architectural Society. Lord Gerald Wellesley on "Borromini." 6 p.m.

THURSDAY, *December* 10.

West Yorkshire Society of Architects. Mr. R. W. Maitland on "Architectural Lighting." At Leeds. 7 p.m.

L.C.C. Central School of Arts and Crafts. Mr. A. Howard on "Softwoods." 7.30 p.m.

Society of Antiquaries. Messrs. J. P. Bushe-Fox, C. F. C. Hawkes, and M. R. Hull on "The Excavations at Colchester." 8.30 p.m.

Institution of Structural Engineers. Mr. W. J. Stewart on "Ulster Parliament Buildings, Stormont, Belfast." 6.30 p.m.

THURSDAY-SATURDAY, *December* 10-12.

Berks, Bucks and Oxon Architectural Association. Exhibition of Members' Works in Architecture. Also, December 10, Alderman W. Hyde and Mr. Frank Gray on "Commercial Buildings and Advertisements," 4.45 p.m.; December 11, Lord Phillimore and Mr. A. Francis on "Town and Country Planning," 4.45 p.m.; and December 12, Mr. C. S. Kimpton and Mrs. Roberts on "Houses and Housing," 4.45 p.m. At the Town Hall, Oxford. 2-9.30 p.m.

SWAN. ICELAND FALCON SWAN.

Garden Sculpture for Capheaton Hall, Northumberland.

SPANIEL LOOKING AT BUTTERFLY. RED SQUIRREL. WILD DUCK.

FANTAIL PIGEON. OTTER. BLACK COCK.

Carved Oak Stair Finials.

BY MISS PHYLLIS M. BONE.

RENT RESTRICTION

IT was, of course, impossible that the present Government, with its hands so full of urgent matters, and with the necessity of immediately passing the Expiring Laws Continuation Bill, should do otherwise than continue the operation of the Rent Restriction Act under that Bill, but the evil effects of continuing an emergency War measure, restricting the right of the owners of one class of property, was again demonstrated by the nature of some of the observations and suggestions made during the recent debate. Past Governments have been amply informed on this question, there having been three committees of inquiry before that which issued its report last July (too near the financial crisis to enable steps to be taken); and besides this, authoritative bodies have made representations on the subject, but successive Governments have been content to shelve the question, although, as we have pointed out on previous occasions, so long ago as 1923 the Act of that year contained a very practical code of restrictions which might be put in force after the expiry of the principal Act.

The evil effects of restricting or taxing one special class of property owners has been exposed in the Rent Restriction Acts, and no doubt will be exposed in land taxation. The rights of the property owners become obscured, and the profits they may make (if any) are claimed on behalf of the community. Thus, in the recent debate, two speakers contended that the sums allowed a landlord for repairs should depend upon the rise or fall in wages, and one naïvely observed that in his opinion the increase was never justified because most of the houses were old. Some visionaries are gifted with such far sight that they ignore all hard facts at close range. Then again, the theory advanced when the land taxation was introduced, again appeared in this connection, that the original capital invested had already been repaid to the landlords time and time again. This is the claim of "the community," by which is indicated those persons who deem themselves entitled in some way or another to live at the public cost or on the property of other people.

It is to be noticed that in observations such as the above the position during all these years of the owner of the property is totally ignored, but the War bore more heavily on the owners of property than it did on the wage-earners either during the War, or in the period that has elapsed since the Armistice, and during this prolonged time he has been deprived of the free use of his property, and besides has been the subject of continuous and expensive litigation in connection with his house property, solely caused by the Acts.

But more important than what the Minister of Health characterised as a "frivolous" manner of dealing with this great and intricate problem, was a charge made by a responsible member of the Conservative Party against the building industry. He is reported to have said: "The fundamental evil with which we were faced was that the wages paid in the building industry, and the profits that interests earned in that industry, were out of all proportion to the wages earned by the people who had to live in the houses built and to the interest which any householder who let his house to a working man could get on his investment. We were faced with the inefficiency and ineffectiveness of the building industry. That was the evil which the Government had got to solve." We wonder that the speaker did not see the important part rent restriction has played in preventing investors in house property from getting an adequate return on their investments, and how he could ascribe this to the building industry we cannot understand, but we consider the whole of his observations unfounded on fact. As regards wages, in the New Survey of London Life and Labour, Vol. II, London Industries I. just issued, in the chapter dealing with the Building Industry, we find the following statement:—"It will be seen on comparison with the conclusions drawn in Vol. I, Chapter IV, that the advance in real time wages of employees in the building industry has not differed appreciably from the average rise in all industries, which was about 14 per cent. for skilled and 28 per cent. for unskilled labour."

Then, after the disastrous experiment in land taxation, which checked the supply of houses before the War, and the War itself, which prevented house building, what was it but private enterprise and the building trade that saved the situation? As regards housing, until October, 1922, there are no exact statistics of the numbers of houses built without State assistance, but if the statistics since that date are examined, it will be seen how efficient private enterprise has been as compared with the local authorities. The following is a table taken from the report of the Ministry of Health:—

	Houses built by private enterprise.		Houses built by local authorities.
	With State assistance.	Without State assistance.	With State assistance.
1923–4 ...	4,311	67,546	14,353
1924–5 ...	47,045	69,220	20,624
1925–6 ...	62,769	66,439	44,218
1926–7 ...	79,686	63,850	74,093
1927–8 ...	74,548	60,332	104,034
1928–9 ...	49,069	64,740	55,723
	317,428	392,127	313,045

It will be seen that with State assistance private enterprise erected rather more houses than the local authorities with State assistance, but that without such assistance nearly eighty thousand more houses were erected by private enterprise than the local authorities erected with State assistance, and private enterprise erected a total in the above years of 709,555 houses as against 313,045 by local authorities. Is that a record of "inefficiency and ineffectiveness" on the part of the building trade? As regards private enterprise, in the strict sense of the term, all subsidies ceased to be payable on houses completed after September 30, 1929, so, then, again statistics become unavailable; but despite the above record, what has been the policy of successive Governments as regards private enterprise? It has been a steady policy of discouragement in every way, and the encouragement of municipal and public enterprise, including in the latter expression certain societies, just as in the new land taxation municipalities and other public bodies are exempted. If the subsidised local authorities, often working with direct labour, could do no better than is indicated by the above figures, what becomes of the charge brought against the building industry which we have quoted above?

The present policy of neglecting private enterprise and assisting local authorities and public bodies is contrary to the true spirit of the nation, and is responsible for many of the evils we are at present enduring. The Committee on National Expenditure, known as the "Economy Committee," with reference to the subsidies, made the following observations:—"We view with deep concern this steadily growing charge upon the Exchequer, and the similar though smaller charges on local rates, for the housing of the working classes. There is serious danger of the nation gradually and without forethought finding itself committed to the principle that a man's wages are not normally intended to enable him to pay for his housing. In our view such a development would be a grave mistake from every point of view, and we can see no ground of principle why it should stop at housing."

These observations have a direct bearing on Rent Restriction, as was shown by some of the suggestions made in the recent debate to which we have referred above.

NOTES

Industrial Enterprise at Cambridge.

It is sincerely to be hoped that the desire of Cambridge to attract and develop a factory area will be controlled by wise counsels. It would be infinitely better to develop an industrial area with its own self-contained population and houses, quite apart from the city of Cambridge, rather than to form a close annexe to some part of the city. Of course, it all depends on what are the prospects of some genuine industrial enterprise taking shape. It is to be hoped that the prospects of a stable government will encourage firms to some further enterprise. The opportunity to create an industrial centre with all the advantages of easy communication and transport, and a resident population to carry on its work, should be quite attractive to those of enterprise and determination. Professor Abercrombie urges in *The Times* the advantages of linking up an industrial area with a Cambridge Regional Planning Scheme and to create a new, efficient, well-planned industrial satellite for Cambridge, the whole thing being brought under some public utility scheme with financial support for an undertaking of national value.

Unity and Control in Buildings.

In some critical commentary on the street architecture of London at the Institute last Monday, Mr. Howard Robertson commented on the lack of unity of effect in our London streets which was, to some extent, now being lost in Paris. This is an essentially English characteristic and in some ways not to be altogether deprecated. We have lost that valuable sense of unity in Regent-street as compared with its former appearance, and it is hardly to be sought for in Oxford-street which amongst miles of characterless work counts only such outstanding buildings as Selfridge's, Waring's and Gamage's. One of our greatest blemishes, however, is the unregulated abuse of advertisements and name-plates. It is really time that something also was done to stop the cruder architectural designs on our street frontages. We can hardly imagine these sort of abuses being allowed in, say, the Rue de Rivoli.

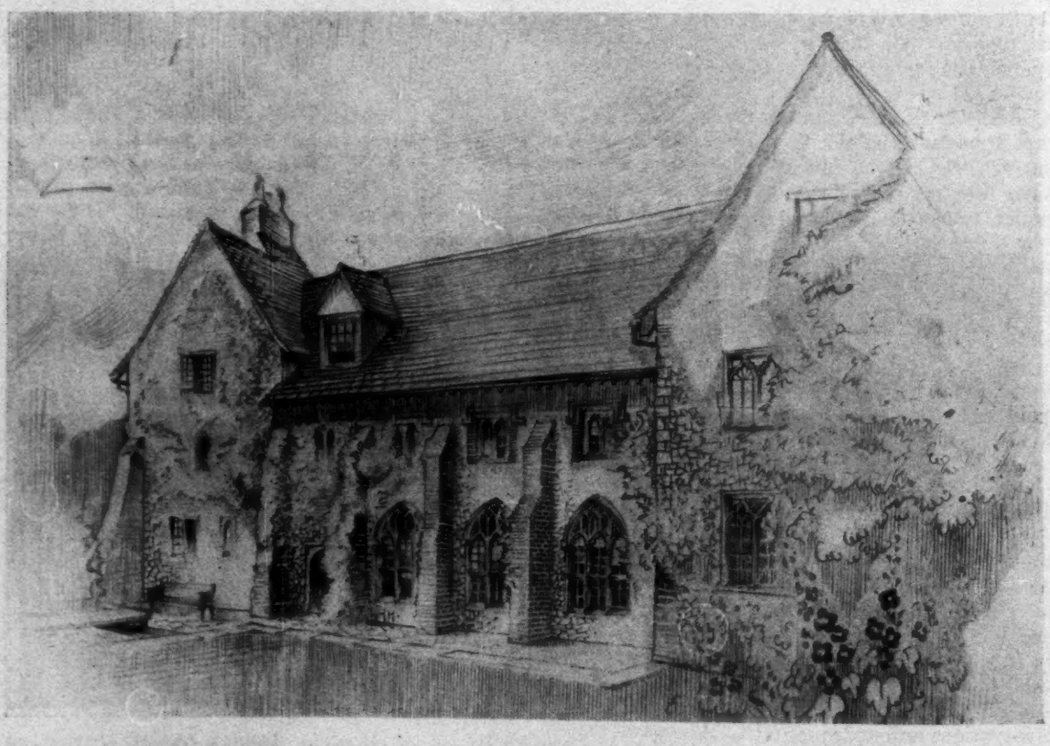
Control of Design.

Mr. Robertson truly says, "Many Parisian streets composed of such individual façades have a certain note of unity due to a tradition in the observance of certain principles and to the habitual use of stone as a material for facing. The Parisian façade takes cognisance of the support of 'its neighbourhood'; the centres of buildings are not unduly stressed—thus avoiding a repetition of detached fronts of emphasis—and a certain community of feeling between the designers of different ages and schools is still evident even in these days of rapid changes."

We quite agree that "the time has come to-day for uncritical good nature to give way to a quality of mind more positive, for lazy toleration or carelessness to be replaced by a touch of civic pride. "The largest city in the world has a right to expect a contribution of technical trained skill in the future architecture of the street." Mr. Robertson has said here what needs to be said. The way to improvement in our street architecture, after all, lies in the desire and capacity of the owners of street frontages. The authorities were powerless to prevent the owners of one of our modern buildings in Piccadilly allowing the tenants to scrawl some badly designed lettering across the frontage of the building. It is an insult to the architect, to the owners and to the general public, to have such a glaring abuse of advertisement. Our only safeguard against such abuses lies in the better feeling of those who have it in their power to degrade our street architecture to the level of mere advertisement hoardings.

Floodlighting on Buildings.

The architecture of our streets has been lately brought into special notice by its illumination in floodlight effects, and this concentration of floodlighting has forced into public attention many of our buildings which have not been so graphically illustrated before. The results of the lighting have no doubt given a new interest to the effect of many subjects both in old and new work which has had much to do with the public popularity. An outstanding charm in London has for a long time lain in many of our beautiful squares and no adequate representation has yet been made of the great charm of form and atmosphere which is to be counted as one of the greatest attractions in London. The floodlighting produced effects of a more or less theatrical nature, such as would most readily appeal to the



Beeleigh Abbey, Maldon: 13th-Century Chapter House and Calefactory.

From a pencil sketch by Mr. E. A. W. Ixer.

A Child's Memorial.

By Miss Phyllis M. Bone.

public who probably are little interested in the delightful and subtle effects of tone and delicate colour which can only be appreciated in daylight.

Materials of Construction.

Following its "Timber Specification," issued last year, the Manchester Architects' and Builders' Consultative Board has now produced a "Specification of Cement Concrete." The Board is a joint Committee of the Manchester Society of Architects and the Manchester, Salford and District Building Trades Employers' Association, and has been formed with the object of promoting knowledge of the properties of building materials. The introduction of new materials and improvements in well-known ones are now of almost everyday occurrence, and studies such as these should be very valuable in keeping the architectural profession *au fait* with developments; we could, in fact, have wished for more information on the wide subject of concrete and reinforced concrete than is contained in the ten pages of this brochure. We note the Board is not enthusiastic in regard to the "fineness modulus" method of grading aggregates advocated in the United States a few years ago, and we agree that this rather complicated method is not necessary in this country, where properly graded aggregates can be obtained from reputable suppliers in most areas; we believe it is true to say that the originators of the method are now waning in their enthusiasm for a method which, although it may produce perfect theoretical grading, still takes no account of the many other variables that affect the strength of concrete.

Concrete Strengths.

In discussing concrete aggregates the Specification states: "Sharp sand is not necessary as it requires more water to give workability, and may therefore produce a weaker concrete." Read in conjunction with the Board's approval of the water-cement-ratio method of producing concrete of uniform strength, this sentence is liable to be misunderstood. The water-cement-ratio theory is based on the proved fact that, other factors being equal, the strength of concrete is governed by the volume of water added in its relation to the volume of cement, and this is measured and controlled by the slump test (also approved by the Board) which keeps a check on a pre-determined plasticity of the mixed concrete. If, therefore, due to their shape or porosity, any of the aggregates need more water to give a desired fluidity, the proportion of cement is automatically increased with the increased water ratio so that the strength of the resultant concrete is the same. The whole object of the water-cement-ratio method is, in fact, to give concrete of uniform strength irrespective of the amount of water used, because the cement and water contents are both increased or decreased in the same ratio. In the account of the method of carrying out the slump test the need for placing the cone on a rigid base should have been mentioned, for when carrying out the test with wet mixes it is found that men walking over a floor several yards away from the site of the test will set up sufficient vibration seriously to affect the amount of slump.

Builders' American Tour.

A small function, somewhat different from the ordinary, took place on November 26, at 34, Russell square, W.C., where, by kind permission of the London Master Builders' Association, an exhibition of some moving pictures taken by members of the Institute of Builders' American tour was given. We understand that these pictures were largely taken through the initiative of Messrs. C. W. Hacking and A. P. Costain, and the film, which includes "shots" of the journey from Southampton to New York and of the subsequent tour to Pittsburg, Washington, Chicago, Niagara and Montreal, has been very creditably edited and titled by Mr. Hacking, by whom also it was shown on Thursday. By all accounts the thirty-three members of the party enjoyed themselves greatly, and we believe that much valuable research work was done. At some later date a lecture on this should be of considerable interest.

Frieze for Stone Mantelpiece, Braidwood, Lanarkshire.

By Miss Phyllis M. Bone. Messrs. Lorimer and Matthew, Architects.

GENERAL NEWS

Professional Announcement.

Mr. Herbert Clarke, architect, has again opened an office at Broomfield Green, Chelmsford, and will be glad to receive catalogues.

Quantity Surveyors' Dinner.

The annual dinner of the Quantity Surveyor Members of the Chartered Surveyors' Institution will be held at the Hotel Victoria, W.C.2, on December 16.

A Tithe Barn, Norfolk.

A new use has been found for tithe barns. A sixteenth-century example in the rectory grounds at South Lopham, Norfolk, has been converted into a parish hall to accommodate 200 persons for social meetings and other events.

Control of Petrol Station Design.

With the object of preserving the amenities of the county, representatives of local authorities, meeting in conference at Exeter, decided to recommend the authorities to co-operate with the County Council in controlling the erection of petrol-filling stations, especially with regard to urban areas, by-laws for rural areas having already been adopted.

Memorial to Sir Hamo Thornycroft.

It is learnt that the Royal Society of British Sculptors have received permission from the Dean and Chapter of St. Paul's to erect a simple tablet to the memory of the distinguished artist, Sir Hamo Thornycroft, who was for some years vice-president of the Society. The work has been undertaken by Mr. C. L. Hartwell, R.A., F.R.B.S.

Twelve-hour Bridge-building Feat.

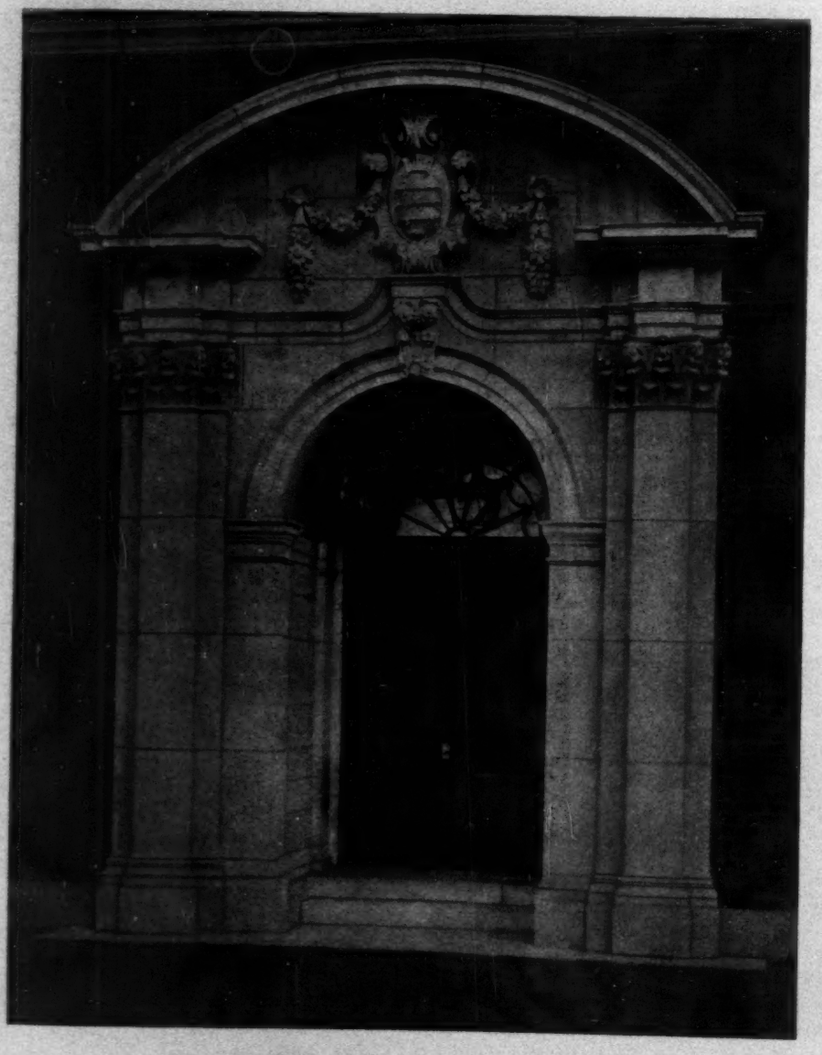
Between midnight and noon on Sunday, engineers cut out an iron bridge carrying a branch of the Southern Railway across Westhorne-avenue, Eltham, lifted it away, and inserted a new bridge, 85 ft. long. They finished the task at 12.15 p.m.—three-quarters of an hour less than the time planned. Soon afterwards a Charing Cross-Dartford train crossed the new bridge.

Christmas Holiday Lectures for Boys and Girls.

The fifth series of Christmas holiday lectures on architecture will be given at the R.I.B.A. by Mr. E. R. Jarrett, A.R.I.B.A., on Monday, December 28, Wednesday, December 30, and Friday, January 1. The talks, which will be illustrated by lantern slides, will be held at 3.30 p.m. on each day. The subjects are as follow:—(1) Houses of the Ancients. (2) Mediæval and Renaissance Houses. (3) Houses of the Moderns.

Lectures on French Architecture.

Intending visitors to the Exhibition of French Art, to be held at Burlington House early in 1932, will be interested to learn that Sir Banister Fletcher, P.P.R.I.B.A., commenced, at the Central School of Arts and Crafts, Southampton-row, on Wednesday, a series of four University Extension lectures on "French Renaissance Architecture." The lectures, which will be very fully illustrated by lantern slides, will deal with, amongst other subjects, the Louvre, the Tuileries, and the many famous chateaux and palaces.



Edmonton County School: Detail of Entrance.

Mr. W. T. Curtis, F.R.I.B.A., County Architect.

COMPETITION NEWS

Girls' Grammar School, Southampton.

The date for submitting designs for this competition has been extended to December 8.

Proposed Junior School, Birkdale.

The Southport Director of Education states that his authority are seeking permission from the Board of Education to proceed with the project for a proposed junior school, Farnborough-road, Birkdale, but until a favourable decision is given the matter cannot be regarded as reopened. Should this happen there will probably be an announcement in our columns.

Arts and Crafts, Tailteann Games, 1932.

We have received from Mr. C. Gifford Wilson, B.A., 1, Lower Ormond Quay, Dublin, C.19 (from whom further copies are obtainable free), the syllabus and rules for the Arts and Crafts Competitions of the Tailteann Games, to be held in Dublin from June 18 to July 10 next. Intending exhibitors are asked to note that this exhibition will be of particular importance, because it is likely that there will be a very large number of visitors to Dublin during these weeks. To make the exhibition as complete as possible, the following suggestions for exhibits are made:—Elevations of churches, mission halls and sports pavilions; designs for altars, pulpits, reredos, ciborium, chalice, and other church furniture; leather book covers for such as telephone, railway guides, etc.; cigarette boxes, ash trays and bowls; book ends, photograph frames, cabinets for gramophone records, etc. Every competitor must be of Irish birth or descent, or have been resident in Ireland for twelve months previous to May 14, 1932.

"THE BUILDER" DEBATE

XLVI.—ASSESSORS' POWERS IN ARCHITECTURAL COMPETITIONS.

Sir,—"Positive" has made out a case which will be popular with the public, but extremely unpopular with his professional colleagues. Any attempt to give laymen a deciding voice in saying which scheme is the best architecture submitted in competition, is the first step towards the destruction of the competition system, and therefore the first step in closing a door by which talented young men can step into the world of success.

The whole point hinges upon how fully the assessor carries out his duty to the promoters. It is for him to absorb their ideas and aims and to frame the conditions accordingly. The idea of his labelling the schemes: "this for cheapness"; "this for convenience"; "this for planning"; "this for beauty," etc., and then shirking his responsibility for saying which are the important and ruling considerations for the competition, would be scandalous. It is for him to have absorbed the whole aim and desires of the promoters, and for him to determine how these aims and desires have best been fulfilled by the competitors. It would be impossible for an assessor to remain indifferent as to the results. He must have a personal preference, and generally a strong personal preference, so that it is inconceivable that, having assumed the position of judge, he should stand back and watch his decisions overruled. Why have an assessor at all, at any rate of a professional kind? If the lay people are to be the judges, let them run the competition, so that the professional man who knows what their opinion is worth can refrain from entering, and save much valuable time.

The whole point to me seems to centre round a belief in the competitive system.

Chances are vague enough as it is; but if the system is loosened in any single particular, there will be no virtue left in the system.

CORRESPONDENCE.

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Modern Sculpture.

SIR,—Perhaps someone would be good enough to enlighten me as to the artistic merit of the "sculpture" on Hay's Wharf building, illustrated in your last issue. Are we to fall down and worship when all traditions of beauty of form and line are violated and the cult of the monstrosity takes their place?

A. R. MAYSTON, F.R.I.B.A.

"Modern European Architecture."

SIR,—One is inclined to read and re-read Mr. Goodhart-Rendel's paper in the vain hope of trying to discover the heart of his mystery. Witty sayings, subtle argument, and brilliant illustrations appear, like some elfish will-o'-the-wisp, in flash after flash, which seem to lead us nowhere in particular, or, at least, to somewhere we do not want to go.

We are told of American architecture, "covered with dead bits of things that one was fond of when alive." Here is a phrase worthy of Dickens, and, indeed, reminding one of Pip, in "Great Expectations," who was regaled "with those portions of the pig of which the animal, when alive, had least reason to be proud."

I seem to remember seeing in *The Times* the other day a reclining figure of a man "foreshortening himself in the air with the vaguest intentions" (to quote Dickens again) unless, indeed, it were in the vain attempt to balance a pile of bricks on his toes! Here is one of those dead bits of which surely, when alive, no one could have been fond! If we must have dead bits on buildings—and why not?—let them at least be lovable bits.

Then there is this unequal contest between the steam-engine and the billhook. It may well be that, when our mechanical age has run its wicked course, the billhook may—like a Conservative Government—come to its own again. In the meantime the billhook will still find its use in the world.

I wish Mr. Goodhart-Rendel had recognised the unique quality of handwork in its right place. To finish an oak beam with an adze instead of by a machine has the effect of educating the material in a literal sense and bringing to the surface its character, which would have been entirely obliterated by machine-work. It also pleases us by producing a variety of planes which reflect the light like the facets of a diamond. The whole art of building consists in a technique which includes subtle variations from mechanical exactitude. If this kind of "craftsmanship" (which, I agree, is a hateful word) is fiddling when Rome is burning, I think we might be worse employed—playing a barrel-organ, for instance! I must confess that the modern outbreak of architecture in Europe appears to me, for the most part, not so much an art as a regrettable and, let us hope, transitory disease. In looking through any building paper illustrated with those strange abortions which we now accept quite seriously as buildings, I sometimes wonder: Is it I or the world which has gone mad that such things should be and cause no special wonder? And I can only turn with renewed thankfulness to the beauty of the old buildings whose message I understand and with whose creators I am in sympathy.

There are curious sub-conscious psychic influences in too much commerce with the machine. We cannot humanise the machine, but the machine can dehumanise the architect; it can impose on him its mechanical standards and destroy the vital significance of his work, so that his completed mechanically inspired building seems appropriate only for habitation by robots.

M. H. BAILLIE SCOTT.

The Modernist.

SIR,—Mr. William Davidson says: "No great period of architecture or art ever confined itself to mere structural necessities or utilitarian demands." I would like to ask what building erected with the label "Modernist" does this? One of the greatest myths in connection with "Modernistic Architecture" is that this is the basis of its design. I have always suspected that the architects, who may be called Modernists, owing to their natural modesty have used this argument with their clients, feeling economy would be a more effective way of being allowed to carry out a building they really considered was better architecturally.

Examine carefully modern Continental architecture, these so-called "simple brick structures," with their most elaborate brickwork, far more elaborate than Sir Christopher Wren's masterpiece of simplicity, Chelsea Hospital, and I question if any large "modernistic" building could be built as cheaply as the elevations of this building.

Actually the Modernist, to produce his effects, frequently complicates and makes structural difficulties. Take, for example, Mr. Joseph Emberton's Club House, at Burnham, with its modernistic staircase windows. I think most architects could have expressed the stairs in a simpler and less expensive manner.

Take another of Mr. Emberton's buildings, the new Olympia, which I consider to be a building of considerable architectural merit and a very welcome change to most exhibition halls: is it really "functional"? If it were, I believe it would present a very different appearance. At first sight one's instinct says: "This is a reinforced concrete structure"; but it is actually built of bricks and steel and faced with stone, and it is not different from any other contemporary building using these materials Are Mr. T. S. Tait's interesting houses and cottages at Silver End "functional"? I should say the average terrace in any London slum was far more so. Would not the stainless steel windows in Crawford's new building in Holborn have contributed a substantial sum to the cost of its missing ornament?

I give these examples because I feel there is a general desire to avoid the real facts of "Modernism," and if it can only be justified on the ground that it is economical or strictly constructional, I am with its opponents. Actually, I believe these designers are instinctively striving after a new style, just as much as those architects who developed Victorian Gothic or Neo-Grec. And, further, this movement is no greater reaction than the return to Classic from Victorian Gothic. It is the next step in orderly development from the plain Georgian type of buildings which have been the vogue since the War.

Taste to-day, except perhaps in the cinema and some of our tea-shops (and who really likes them, even if they do make us say "Ooh"?), desires greater simplicity. It likes its motor-car to have simple lines, its women's dresses appear singularly free from frills and furbelows. Our homes are ceasing to be museums, and no longer are our dining-rooms overcrowded second-rate picture galleries. Thus Modernism is but the architectural expression of this modern desire, and is "the reaching out materially to sane apprehension and understanding of what is beyond."

R. S. WILSHERE.

Concrete versus Masonry.

SIR,—A craving for mere change, of whatever character, is sometimes urged for reasons which cannot withstand the process of calm analysis. The recent expression of opinion by Mr. Maxwell Ayrton in favour of concrete for bridges and important monumental structures, as opposed to their treatment in masonry, is an example of a desire for change which cannot be justified. He dismisses the external application of granite to concrete structures by the sweeping statement that granite is sham skin, and ignores the fact that good design embodies within the same structure a number of principles of construction each intended to perform its own economic or artistic function. It will not do for him to tilt at the windmill because it is built of masonry.

The traditional use throughout the ages of masonry for monumental structures does not rest alone on the dignity which that medium conveys, but because there is felt and appreciated the labour and skill of the individual craftsman which that medium reflects, and which manage to convey a subtle personal note. Its characteristic is almost proverbial, as when we speak of solid masonry, and its æsthetic purpose is always apparent as compared with the all too evident sham of concrete.

Masonry therefore employs a tradition which concrete in all its coldness cannot simulate. The public is justly proud of its national memorials of past ages and the skill or inventiveness of the workers who created them. Must all our pride be reserved for the work of the past?

As a mason I have just reason for pride in the traditions of my craft, and that spirit was sustained not only by viewing the work of the past ages, but because it engendered a desire to reproduce or improve upon that intangible beauty which only a mason, I think, can fully appreciate. Are we to be told by Mr. Ayrton that such a tradition in craftsmanship should not be preserved? Would he dump his utilitarian substitute for masonry—this cold, crude concrete—near Westminster Abbey, the Houses of Parliament and the County Hall?

As a member of the London County Council I am much perturbed at the suggestion that concrete should appear in the elevation to the proposed new bridge at Chelsea. I do hope some way will be found to avoid such a barbarity in this environment. Chelsea—with its æsthetic and historic associations—should be protected against the cheap crudities of concrete, either in its raw state or diluted by Mr. Ayrton's artifices.

S. STRANKS.

Cavity Walls.

SIR,—If the 1-in. cavity walling in the construction proposed is to be filled with a cement pour, it should for preference have this in a waterproof cement, several brands of which are now upon the market. I would suggest that the two leaves should be laid in a cement mortar, gauged, say, 5 : 1, instead of lime, thereby obviating such conscientious cleansing of the cavity necessary if lime and cement are used, which have very poor adhesive qualities one with another. A better wall of this type would result from filling the cavity with one of the special compositions on the market instead of the cement pour, which material possesses the advantage of quick setting and handling by unskilled labour. Laxton gives a note of half-an-inch cavity construction, which, if recommended by the makers as sufficient, should result in a small saving on costs, and in addition has the advantage of proved waterproofing qualities over a number of years. This type of walling would better adapt itself to settlement than the cement pour.

ARTHUR CLARK.

The Builders' Benevolent Institution.

SIR,—I am desired by my committee to thank you for your kind reference to the Institution on page 820 of your issue of November 20, and to say they earnestly trust that the support which you have given to the President's appeal to London builders to make a habit of giving a small but annual subscription will have satisfactory results.

My committee feel, however, that it should be clearly understood that the Newsvendors' Charity is a national one, whilst the Builders' Benevolent Institution is solely a London one. The committee would be greatly obliged if you would publish this letter in your journal in order that the position may be made clear to your readers.

W. J. RUDDERHAM, Secretary.

STREET ARCHITECTURE OF LONDON.

At a meeting of the R.I.B.A., held at 9, Conduit-street, on Monday evening, a paper on this subject was read by Mr. Howard Robertson, F.R.I.B.A., S.A.D.G. The flood-lighting of buildings during the International Illumination Congress, said the lecturer, brought thousands of people into the streets. It also brought, we were told, thousands of pounds of business into London undertakings. Transport, shops, hotels, restaurants, all benefited because engineers and architects had combined for a succession of nights to dramatise the streets of London. Apart from a few set pieces, buildings provided the principal attraction. The architecture of streets and squares for a brief period held the centre of the stage. And people gazed with fresh wonder and delight at buildings which were mostly not new, and nearly all familiar—so familiar that in their daytime aspect they were scarcely noticed.

But suppose that, instead of upon St. Paul's, the Tower, Big Ben, Thames House, Buckingham Palace, the engineers had turned their batteries upon the architecture of the Strand, Victoria-street, Shaftesbury-avenue, and Tottenham Court-road? A few people might have come to scoff, and fewer still would have remained to pray—for the lights to be switched off. And yet, in the daytime, we accepted without dismay the architecture of these and other streets like them, architecture nearly always dreary and often ugly, coarse, mean-spirited, pretentious, or vulgar. It was the streets of the last 70 years which were the true offenders. They reminded us, in our lucid moments, of the degradation to which our beloved art of architecture had been subjected. And by their multitude, their air of settled familiarity, they induced the coma and lethargy from which neither public nor architects could rouse themselves without immense effort.

To achieve a broader view of our past and present achievement, one should absent oneself for a month or so abroad, and return to try and capture something of the first original impressions of the newcomer. One should approach London by train, passing through dingy acres of tiny doll-like houses and forests of cowl-capped chimneys vomiting potential fog. Almost immediately was a redeeming feature, for in those brick-lined streets of the outskirts, there was a certain unity: the houses were true to type. But one noticed how small was their scale. Compare the entry into London with the approach to Paris, flanked by cliff-like apartment houses, their façades so often rich with carving and wrought iron, and their unfinished rubble flanks as sinister as a lofty prison wall.

Arriving at Charing Cross there was the Strand. Innumerable signs everywhere, lettering on the windows of every floor, more lettering spiked to the façades; bad lettering most of it, of a hundred different types, with each tenant proclaiming his name as often as possible in every conceivable alphabet. Why was every individual small tenant who wished to do so allowed to write his name on the glass of his window, and every big one permitted to scrawl it across the façade? What architecture could stand up against that eruption of sign-writing? How would the rue de Rivoli look if all the signs of the Strand descended like locusts in a single night to blight its dignity? Signs by all means, but as part of the design.

Back of the lettering of the Strand, the buildings. A heterogeneous collection; amongst them a few which were tolerable, but insufficiently united to control the general atmosphere of muddle. No unity of conception; here an attempt at modernism, there a particle of Adam. Obviously there existed no community of thought amongst the designers. The individuality of the untrained triumphed, each architect was for himself, and too often there was no real architect at all. Nevertheless, there brooded over this Strand of ours an atmosphere which was comforting to certain moods. Its architecture was reassuringly low-brow, its buildings were such as to make one feel at ease if by chance one's clothes were creased, one's boots unpolished, and one's nails unkempt. The Strand and its brother, the Charing Cross-road, were streets of the grubby-collar man. They catered to our occasional instinctive rebellion against order and tidiness. Only the efficient comfort of the big new buses was there to show that good design was not necessarily unfriendly, and that to be comfortable one did not need to be slovenly.

If one arrived at Victoria, one might perchance be driven through Belgravia. There one would see another London: stucco fronts and an impression of generous scale, even though these nineteenth century houses were actually smaller than most commercial buildings. An imposing architecture, prosperous and a little smug, suggestive of material prosperity and butlers. And here, by contrast with the Strand, was cohesion, a sense of dignity and manners good, if occasionally pompous. Like many of the residential centres, Belgravia enjoyed in its architecture a unity which was lacking in the commercial streets. In Kensington, in Bloomsbury, one found similar sections of residential London marked with this same unity, which was not necessarily produced by repetition, but was the outcome of kinship in thought and aim. There were the squares which were often complete entities; there was the Regent's Park district, with many charming variations on a clearly stated theme of dignity. But to-day in those quarters, we found, also, sudden contrasts, big new blocks of flats, or shops, utterly different from the older architecture of the neighbourhood, and, what was more significant, completely different from each other. New buildings all, but designed by men who apparently had shared no common ground of expression.

In the past, residential London had evidently been built up in large sections, during successive periods, which were dominated by schools of thought, resulting in widespread adherence to the style of the day. The commercial architecture of these periods had to-day largely vanished, in the manner of Nash's Regent-street, leaving the residential streets and squares comparatively intact, and while the problem of domestic architecture had remained sufficiently static to permit of some continuity between the old street architecture and the new, the design of the commercial building had no genuine roots in the past.

If we glanced at other cities, we saw that we were not alone in our difficulties. The architecture of Paris, the city most unified in her buildings through continuity of style, material scale, building laws, and, more important still, the training of her architects, was to-day losing something of this quality. Some of the new architecture was making a break with the past, and there was a fairly sharp cleavage visible on the horizon. The streets of Paris might tend to become, like London, an exhibit of individual efforts and ideals in architectural expression. But others of our difficulties in London were peculiar and deep-rooted. This vast city was, in the main, planned without grandeur; it was a collection of districts, and the scale of the layout of our streets was appropriate to this sectional planning and to the small scale buildings which in the past had largely dominated. The finest scale in London had been that of some of her enclosed squares and spaces, particularly those of the later eighteenth century.

To-day we were in process of changing scale. Needs of commerce, of living, demanded bigger buildings, shops, offices, flats. Our transport needs were exacting bigger vehicles. So buildings and vehicles increase in bulk, and the proportion of both outgrew the width of our thoroughfares. As buildings increased in height, some of the finer relationships with the width of thoroughfares had been destroyed. Regent-street was a case in point, and Kingsway offered in its proportions of width to height an equality which was deadening to grandeur. That change of scale which was in process was one of our architectural difficulties, and another was our unpreparedness to cope architecturally with the suddenly more urgent demands of modern business.

We had built up in England architectural traditions as fine as any in domestic and ecclesiastical work, and by no means negligible in civic buildings, but in certain fields we had failed to realise that tradition was formed as the result of successful experiment. Narrowness of outlook and lack of imagination at the time of the Revival killed the Gothic at the time when its constructive principles might have become a source of inspiration for design appropriate to modern frame construction; and, for one cause and another, we found ourselves to-day with a style which, for the sake of simplicity, we would call Georgian, as our generally accepted national expression. But the Georgian style was never developed on the basis of the structure or the requirements encountered to-day in modern commercial buildings, and the best efforts to adapt it served only to illustrate its limitations. Sir Edwin Lutyens, for instance, was a master in handling it; he had never designed a single building which was uninteresting. But his skill was the most satisfying in those buildings to which his characteristic type of expression, a free "Georgian" was best suited. Even the finest architects, who were accustomed to clothe their structures in a certain style of dress, were sooner or later faced with the question of whether the time had not come to change their tailor. And more especially in commercial buildings, all architects needed to forget their favourite themes and to examine their problems in a fresh and fundamental way. Structural emancipation from limitations permitted to-day wide licence. Immense spans, vast areas of glass, might be demanded, and call for expression. Requirements tended to become more and more specialised, and it was doubtful whether there was a great future for the uniform screen type of façade treatment which marked certain phases of traditional street architecture.

The abandonment of the uniform street treatment of the type exemplified in sections of Regent-street resulted in the loss of certain elements of cohesion and grandeur. Each building in a street tended to become, as was already the general rule, a separate unit. But if there could be control of main lines, an insistence on the importance of a proper junction with contiguous façades, and, above all, a greater community of outlook between architects, the chances of failure would be greatly lessened. Many Parisian streets composed of individual façades had an ensemble of unity, due to a tradition in the observance of certain principles and to the habitual use of stone as a material for facing. The Parisian façade took cognisance of the support of its neighbour; the centres of buildings were not unduly stressed—thus avoiding a repetition of detached points of emphasis—and a certain community of feel-

ing between the designers of different ages and schools was still evident, even in these days of rapid changes.

It would be to the benefit of London street architecture were it possible for the buildings in selected streets to be allocated to architects of similar tendencies. It would be fairly easy to name a dozen architects of the "modern" persuasion who would put together, in a row, a dozen or more individual frontages, each to their own clients' requirements, yet forming a harmonious ensemble; and the same would be true of designs of members selected from the "traditional" group. The trouble arose when the functional modernist was working alongside the man who detested this type of work, and meant to say so with all the emphasis of columns and pediments. Team work was essential to the success of street architecture, and it was because of so much new building in Amsterdam, Berlin, and even New York, had been handled by architects with a certain similarity of ideals and training—in most cases with modern tendencies—that the street architecture of these cities had outstripped our own in unity of conception as well as in vitality and interest. Behind diversity of form and treatment peered the possibility of discord and harmony in the essential approach to design, and the result was either war or peace. Façades vertical, façades horizontal, façades patterned, might all join together in street harmony if their design was imbued with the same spirit. Form was an important factor, but more so were the foundations of character.

Much attention was being paid to day to questions of directional form in street architecture. We might read, for instance, that all the most modern continental work was horizontal, while the best expression of the skyscraper was vertical. Those sweeping statements were only half-truths. The *Daily News* building in New York, by Raymond Hood and Fouilhoux, was vertical; the façade of the McGraw-Hill building, by the same architects, was designed as a pattern. Erich Mendelsohn appreciated the value of horizontals in his "Schocken" shops, but employed pattern in his "Metal Workers' Union" building. Horizontal, vertical, pattern, the expression was the outcome of consideration of position, purpose, construction, and the study of form. The present cult of "Horizontalism" was probably due to the growing popularity of the cantilever system of façade construction and the desire in certain categories of buildings to obtain continuous unobstructed windows. The stressing of the horizontal lines in façades, such as the "Europa House," constructed on normal modern methods and with windows of normal spacing, was probably a recognition, expressed in form and line, of a latent structural possibility, for new forms of structure introduced themselves into decorative and surface treatments to-day as motifs in the same way as they had done in the past.

There would always be room for a few exceptional buildings—the dandies of architecture, the freaks, the throwbacks. Gladly we might welcome them, provided they be genuine and frank in their purpose. Equally might we enjoy the gaiety of Tudor Liberty's as the reflecting granite of its black-faced neighbour, Ideal House, and the trim modernity of Crawford's. These buildings had their value as points of emphasis or colour. We might prefer them to the pompons and "big boys" of the City, the Cyclops architecture of finance, fat, aggressive, and blindly groping towards a future empty of everything except an alarming durability. In much of this serious work there was no promise for anything except colossal expenditure of money; no contribution of pleasure, gaiety or deep message to the citizens of London; its inspiration seemed to be almost completely material in its essence. It was this class of building which gave point to the gibe of Eric Gill in his book on Clothes: "The wood construction of an ancient Grecian villa, having become the ornamental stonework of the Parthenon, becomes in its turn the absolute law of three centuries of London architects."

The task of the architect was easiest when his building stood either completely isolated or by circumstance more or less detached. And there was no detraction from the merit of success in calling attention to the fact that the bulk of the buildings which had been distinguished in the award of the R.I.B.A. London Architecture Medal were buildings of this type. The medal was first awarded in 1922 to Mr. Curtis Green, A.R.A., for Wolseley House, in Piccadilly. Succeeding awards had been to Frank T. Verity for the Shepherd's Bush Pavilion, to F. H. Greenaway and J. E. Newberry for the Auctioneers' and Estate Agents' Institute, to Sir Edwin Lutyens, R.A., for Britannic House, to Hubert Lidbetter for the Friends' House, Euston-road, to Sir Giles Scott for Chester House, Clarendon-road (his own home), to J. Murray Easton and Howard Robertson for the Hall of the Royal Horticultural Society, to H. Percy Adams, C. H. Holden and Lionel G. Pearson for Underground House, and this year to Arthur Davis for the Westminster Bank in Threadneedle-street.

A glance at some of these buildings showed that the Jury for the Medal, composed of architects and laymen, had had no prejudice and no concern beyond the recognition of good design in whatever manner of expression. There was no bias towards either tradition or modernism; the award appeared to go to achievement recognised on a catholic basis. Each building was reckoned as outstanding in its merits as a contribution to street architecture. The Jury was aware that the human ideal was a changing one.

No thoughtful person, in comparing Mr. Davis's Westminster Bank with, say, Underground House, would fail to recognise a difference of problem which might help to explain a difference of expression. In the design of both buildings the architects had sought to imbue façades with the most appropriate character. Mr. Davis found it in a sensitive rendering of a traditional theme. Messrs. Adams, Holden and Pearson, in their lofty office building, found no useful precedent in antiquity, even had they the mind to seek one. It was dangerous to prophesy what would happen were to-day Mr. Davis to tackle the Underground Building, and the architects of this were to attempt to remodel Mr. Davis's Bank. But in all probability the characteristic viewpoint of each architect would to a large extent remain expressed.

In comparing the work of past years for the London Architecture Medal, the basic harmony existing between things of quality remained apparent, but there was, nevertheless, evidence of divergence as to methods of expression, and this was a reflection of the period of transition through which we were passing. Nothing was less to be desired than formula for design, or the suppression of individuality. Yet strong directives, the common acceptance of certain guiding principles, should, and probably would, ultimately govern, and bring our modern street design more into an expression of national team work, to the ultimate benefit of British architecture. Ahead of us lay, no doubt, structural and economic developments which might relegate our present-day discussions of style to the realm of dead and useless things. Should we discover new methods of walling, factory and prepared, lighter and cheaper structural frameworks; should our traffic arrangements include two-level circulation, we might see Oxford-street on stilts and the Charing Cross-road lined with walls of clean, gleaming glass in white and colour. When so much of the façade was already glass, why not the remainder?

His rôle was not that of a prophet, but should drastic changes take place in materials and structure, it was clear that much of the architectural baggage which we carried would be jettisoned. The essential principles of design would remain, and perhaps our street architecture would enter into a new and far superior phase. Towards the establishment of a higher standard Mr. Arthur Davis and his late partner, Mewès, had greatly contributed by their scholarship and taste. In their banks, the Hudson Bay building, the *Morning Post* building, and the Ritz Hotel, they had walked in the company of the most polished of their contemporaries. It was fitting that a paper on street architecture should coincide with the recognition by their colleagues of work which had been, and would always remain, a potent influence for the maintenance of quality.

Discussion.

Mr. Kenneth Clark, proposing a vote of thanks to Mr. Howard Robertson, said that the buildings shown on the screen (those to which the London Architecture Medal and Diploma had been awarded in past years) were units, and had not the especial problems of street architecture. The real problem arose when shops and big buildings had to be put up in rows. The big commercial firms insisted on their buildings standing out from their neighbours, and resting, apparently, on sheets of glass. Street architecture needed control and subordination, but he saw no prospect of that being brought about.

Mr. H. Chalton Bradshaw, seconding the motion, said that in discussing street architecture they were inclined to overlook the building owner or client, whose influence was frequently very far-reaching; the owner had so often reached a decision on the question of what a building must look like. It had to be remembered that there was a commercial advantage in novelty, which did not always imply good architecture. With regard to the Westminster Bank building of Messrs. Mewès and Davis, this not only adequately fulfilled the requirements, but was worthy to take its place among the good buildings which were the heritage of our country.

Mr. J. Alan Slater said that the present system of land tenure and leases, under which leases fell in at different times, limited the possibility of designing a street as a street. In Regent-street we had "crowds" of leases falling in at a specific date and Regent-street could have been planned and designed as a unit. Generally, however, the matter was almost impossible to control, and was one of the root causes of the indiscriminate character of elevations in London.

Mr. Martin S. Briggs said however difficult might be the task of the jury of award in making their decision for the London Architecture Medal, the real fun would begin next spring, when the assessors had to make up their minds on the street façade of the Institute's new home. Should it preserve the good manners of Portland-place, take account of the Langham Hotel or Broadcasting House, or be in sympathy with Mr. Verity's very charming flats? It was going to be very interesting to see the decision regarding what, for the Institute, would be the most important façade in London.

Mr. R. Goulburn Lovell recalled that both Mr. Robertson and Mr. Davis were students in his atelier in Paris, and said it was very gratifying to find his two young men blossoming forth as they were.

Mr. Michael Waterhouse and Mr. J. D. Hossack having spoken, Mr. Frederick Towndrow said he was sceptical about "expressing individuality," and felt that we must think as a nation and not so much about the individuality of our art. If, for instance, all the buildings that had received the London Architecture Medal could be put up in a row we should have chaos. He suggested that the Royal Fine Arts Commission might be called in to settle the problem of façades.

Mr. Murray Easton said we had not yet reached the time for a synthesis of architecture, and it would not come from the Royal Fine Arts Commission. It would come gradually, and from below, not from above. For the time being, we must individually work out our own salvation.

The President (Mr. Raymond Unwin) put the vote of thanks to the meeting. It was carried with acclamation, and the lecturer replied.

ILLUSTRATIONS

PLATES.

New Town Hall, Stretford.

The first sod of the new Town Hall at Stretford was cut on August 21 last by Mr. Councillor Child, J.P., the chairman of the Council, and the work is now proceeding rapidly. It is one of the buildings approved by the Unemployment Grants Committee of the Government as a work of public utility, and a material contribution is made towards the cost.

Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., of Bolton, were appointed architects, and several arrangements of plans were submitted and discussed in detail. After careful consideration the scheme as now being built was decided on and approved at the Government inquiry. The tender of Messrs. Edwin Marshall and Sons, Ltd., of Ashton-under-Lyne, was accepted at £88,885, this amount being well within the architects' estimate.

Central on the Talbot-road front is a portico leading into the entrance vestibule and hall, with the main staircase central in the building. On the ground floor is the treasurer's department, with the rates hall having direct entrance from the Warwick-road. The health department, with the medical officer's quarters facing south, and the school clinic, with the juvenile employment bureau, are on the westerly side, with direct entrance on that front.

Access to the first floor is by the central staircase, or the staircases at the northerly ends of the east and west wings, as well as by the central passenger lift to the council suite oval. The westerly portion of this floor is utilised for the surveyor's department and education offices. The easterly part of the south wing is devoted to the town clerk's offices, which are in close communication with the council chamber suite, which occupies the whole of the first floor of the eastern wing and facing Warwick-road. The council chamber, looking into the inner quadrangle and away from the road noises, has council hall adjoining and gallery for the public. At the front is a suite of three committee-rooms of varying sizes, so arranged as to be able to be thrown together, making a small hall capable of seating 250 people. The chairman's room is at one end and the members' dining-room at the other, with electric hoist connection to the kitchen on the lower ground floor.

On the upper floor is the caretaker's flat, while the space in the roof is left unfinished, but so arranged as to be available when required for the future expansion which is inevitable in the modern trend of municipal government. On the lower ground floor are strong-rooms, store-rooms, dining-room and kitchen.

Effort has been made to give a quiet and dignified architectural character to the building. The central clock tower is 108 ft. high. Wire-cut Ruabon brick facings, set Flemish bond with wide joints and pink-toned Darley Dale stone dressings, are used throughout. The Talbot-road front is set back 75 ft., and the Warwick-road front 60 ft., and, as this will be laid out and planted, as well as the great open space at the back, the Town Hall will be set in a garden. The land is arranged so that, facing Warwick-road and communicating with the municipal building, there is planned a public hall to seat 1,500 people and space for sessions hall adjoining.

In addition to the general contractors, the following contractors are associated with the work:—H. A. Clegg and Sons, Chester, stonework; A. J. Herron and Sons, Manchester, plumbing and glazing; Redpath, Brown and Co., Ltd., Trafford Park, Manchester, steel constructional works; W. Royle and Company, Manchester, slating; Jas. Glynn, Oldham, plastering; Jos. Jackson and Company, Chorlton-on-Medlock, Manchester, painting; Caxton Floors, Ltd., hollow type floors and roof flats; Ragusa Asphalte Paving Co., Ltd., Manchester, asphalt tanking.

Mr. Andrew M. Meldrum is the clerk of works.

Colonnade and Shops, Douglas, Isle of Man.

The new colonnade and shops illustrated have been recently completed for the Douglas (Isle of Man) Corporation on the Villa Marina site. They comprise the first portion of a large scheme designed to modernise and improve this site. The second portion, a shopping arcade with lavatories under, is now being proceeded with. The whole scheme is to the designs and under the supervision of Messrs. T. H. Mawson and Son (E. Prentice Mawson, F.R.I.B.A., M.T.P.I., V.P.I.L.A.), chartered architects, of London and Lancaster. The total cost is estimated at £100,000, the section recently completed, as illustrated, and that now in hand costing £50,000.

The total length of the colonnade and shops, etc., is 600 ft. overall. The double colonnade at the right-hand end is 400 ft. long, with an inner shelter overlooking the gardens and bandstand, etc., and screened by a division wall with glazed lights for protection from the weather, and for privacy from the outer shelter, which overlooks the sea. The flat over these shelters forms an upper promenade deck, overlooking both the sea and the gardens, and access to it is obtained by broad flights of steps from each end and centre of gardens. The remaining 200 ft. of the structure has been designed as lock-up shops with a glazed lean-to roof over an open colonnade in front, for shelter and for light to the shops. This glazed end will eventually be merged into the future scheme of the arcade and winter garden, etc. The whole of the structure (with the exception of the columns, which are precast) is in reinforced concrete, and a durable and pleasing finish to the faces of the concrete, etc., has been obtained by rendering them with a crushed brown stone aggregate and cement render. "Ferrocrete" was used throughout.

The general contractors were Messrs. Matthews and Mumby, Ltd., of Ardwick, Manchester, who have also secured the contract for the second portion. The quantity surveyor was Mr. W. T. Davenport, F.S.I., F.I.Arb., London, W.C., and Warrington, with whom was associated, in London, Mr. A. E. Newman, F.S.I., A.I.Arb., A.I.Struct.E.

Edmonton County School.

This school is situated on the south-east side of the Cambridge-road, on an open site of approximately eleven acres. It accommodates 490 scholars, and is planned around two quadrangles, with the assembly hall, cloak-rooms and staff quarters facing the Cambridge-road. The classrooms, laboratories and other teaching rooms are arranged at the sides and rear, with the most suitable aspects and away from the noise of the road, the gymnasium being planned centrally with light and ventilation from both courtyards. The classroom adjoining the assembly hall is raised above the latter, and is so planned as to be capable of being used as a stage. The external walls are faced with multi-coloured, sand-faced bricks with red dressings and stone plinth, cornices, entrance doorways, etc. The roof is covered with Collier's tiles. The assembly hall is panelled in mahogany up to a height of 8 ft. 6 in., and the ceiling is finished with acoustic plaster.

The general contractors were Messrs. James Stewart and Sons (Tottenham), Ltd., who also carried out the mahogany panelling to the assembly hall and other joinery throughout the school, the latter being in British Columbian pine. The sub-contractors were as follows:—Acme Flooring and Paving Co., Ltd., wood block flooring; "Alundum" Tiles, Adamite Co., Ltd., stair treads; Blackwells and National Roofings, Ltd., "Corona" roofing felt; Clark, Hunt and Co., Ltd., cloak-room fittings and window gearing; Carter and Aynsley, Ltd., ironmongery, etc.; Archibald Dawnay and Sons, Ltd., constructional steelwork; Ewart and Son, Ltd., copper flats and lightning conductor and dome to flèche; Emerson and Norris, Ltd., cast stonework; General Asphalte Co., Ltd., asphalting; James Gibbons, Ltd., cycle racks; Haywards, Ltd., iron staircases and pavement lights; P. C. Henderson, Ltd., sliding door gear; Archibald Kenrick and Sons, Ltd., sliding door gear; Henry Hope and Sons, Ltd., steel sashes; T. A. Harris, Ltd., sanitary fittings; The Indented Bar and Concrete Engineering Co., reinforced steel bars; Kendells Paving Co., Ltd., granolithic paving; The London Brick Co. and Forders, Ltd., three-quarter million Fletton bricks; James Latham, Ltd., "Mahtal" brand mahogany plywood for hall panelling; May Acoustics, Ltd., "Sabinite" plaster; Eric Munday, Ltd., wrot-iron gates; Mellows, Ltd., patent roof glazing; Walter Macfarlane and Co., rainwater heads, gutters, etc.; J. H. Nicholson and Co., Ltd., heating; Wm. Oliver and Sons, Ltd., mahogany for hall panelling; Hy. C. Parker and Co., multi-coloured facing bricks, red arch bricks; Standard Range and Foundry Co., Ltd., ranges and stoves; James Stewart and Sons (Tottenham), Ltd., joinery and mahogany panelling; Stirling and Johnson, Ltd., roofing; Tunnel Portland Cement Co., Ltd., Portland and rapid hardening cement; Tar Paving and Tar Macadam, Ltd., tar paving; Venesta, Ltd., "Plymax" panels; P. W. Rutherford and Co., linoleum dadoes; G. A. Weston, electrical work.

Mr. W. T. Curtis, F.R.I.B.A., is the County Architect.

Hitchin Boys' Grammar School.

This is a large extension of the present school, and the plan has been governed by the surroundings and the fall of the ground to the north, advantage of which has been taken in the provision of adequate playsheds, cloakrooms, changing rooms, etc., at the playground level. All the classrooms face south, and the other rooms have suitable aspects. The school hall is placed between the old and the new buildings, has a proper stage platform properly equipped, and possesses excellent acoustic qualities. The buildings are approached by a private road and are only visible from the playing fields, which are of large area.

The buildings are constructed with local red brick and Sussex stocks and covered with Messrs. Tucker's Loughborough tiles. The windows are of Austral type, with wide moulded frames, and were made by Messrs. James Gibbons, who also supplied the ironmongery. The sanitary equipment was furnished by Messrs. Adamsez and the laboratory fittings by the North of England School Furnishing Co. The heating and hot water supply was carried out by Messrs. Geo. Jones and Sons, of Hitchin. The constructional steelwork was carried out by Messrs. Dawnay and Sons, and Messrs. Willmott and Sons, of Hitchin, were the builders.

The architect is Mr. S. B. Russell, F.R.I.B.A., of Hitchin.

Beeleigh Abbey, Maldon.

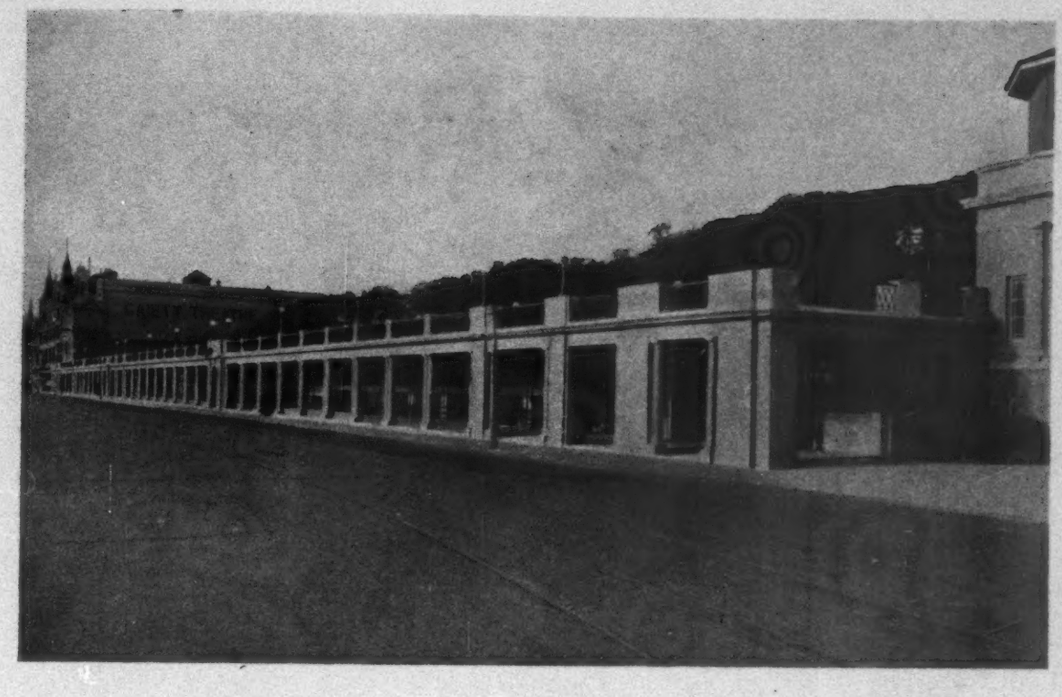
Beeleigh Abbey, of which two pencil sketches by Mr. E. A. W. Ixer are reproduced on pages 903 and 906, was a house of the Premonstratensian or White Canons, founded by Robert De Mantell in A.D. 1180. The Early English chapter house, 40 ft. by 19 ft., the calefactory, 42 ft. by 21 ft., both with groined vaults, supported on slender Purbeck marble columns, and the dormitory with wagon vault of chestnut, are the most perfect relics of the original buildings remaining. The stone dressings externally are of Caen limestone. These, together with the Tudor portion, are now used as a residence.

Westminster Bank, Threadneedle-street, E.C.

We give this week an illustration of the exterior of this bank, which has been awarded the London Architecture Medal. The presentation was made (as reported on page 922) to Mr. Arthur J. Davis, of Messrs. Mewès & Davis, at Monday evening's meeting of the R.I.B.A.

Westminster Bank, Threadneedle Street, E.C.: Awarded the London Architecture Medal.

Messrs. Mewès & Davis, F.R.I.B.A., Architects.



View from Roadway.

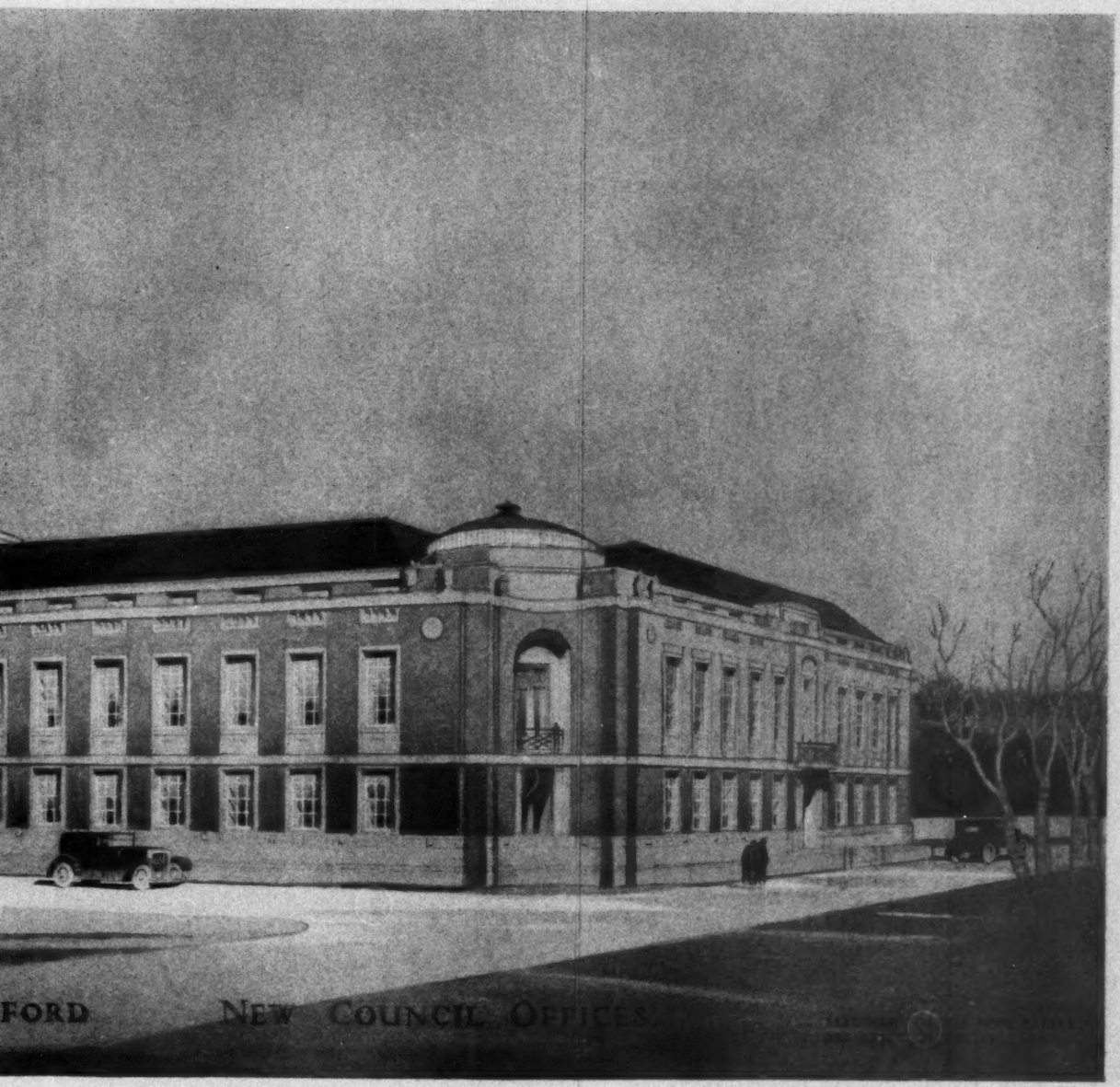
Outer Shelter.

New Colonnade and Shops, Villa Marina, Douglas, Isle of Man.

Messrs. T. H. Mawson & Son (E. Prentice Mawson, F.R.I.B.A.), Architects.

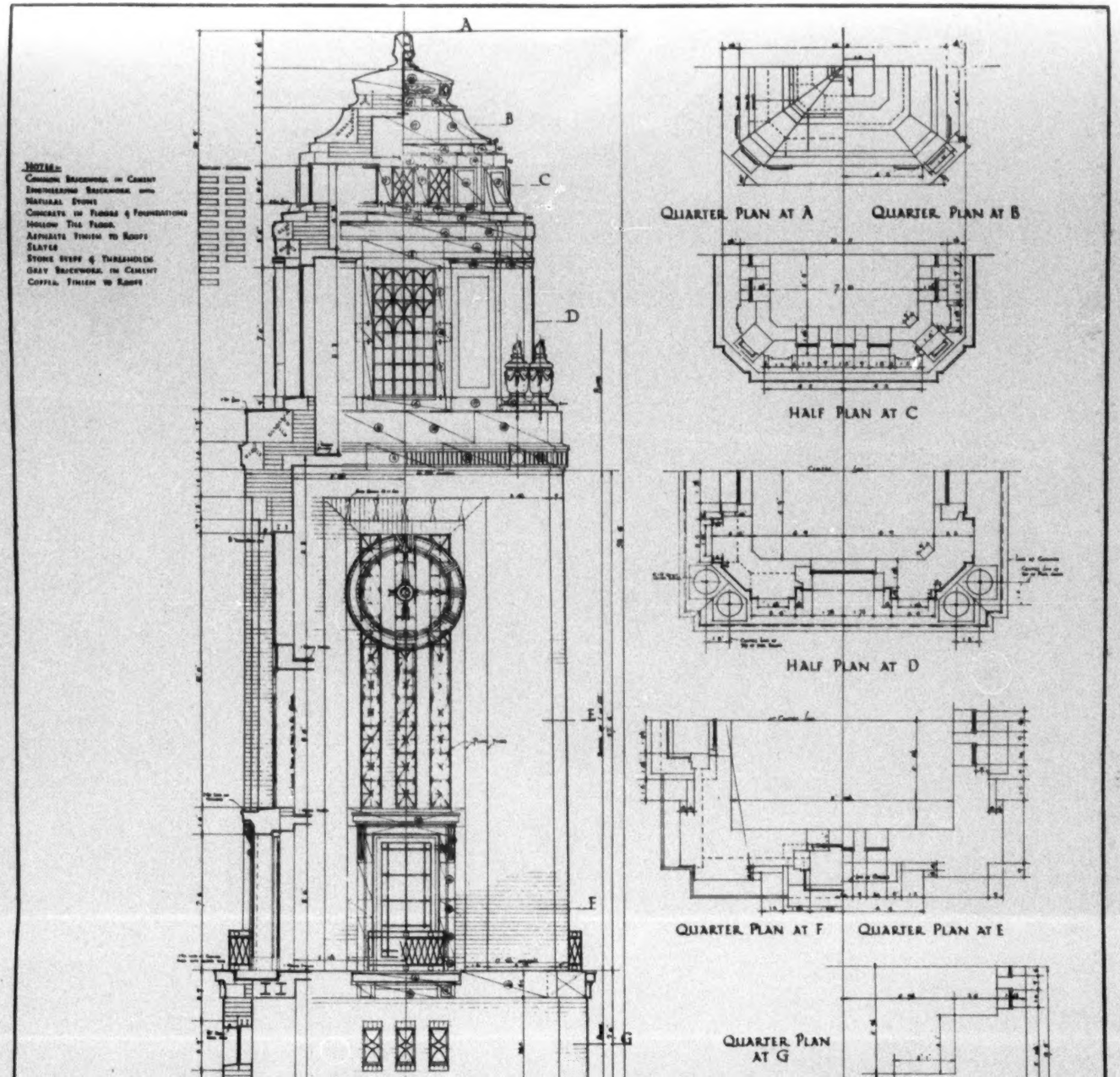
New Council Offices, S

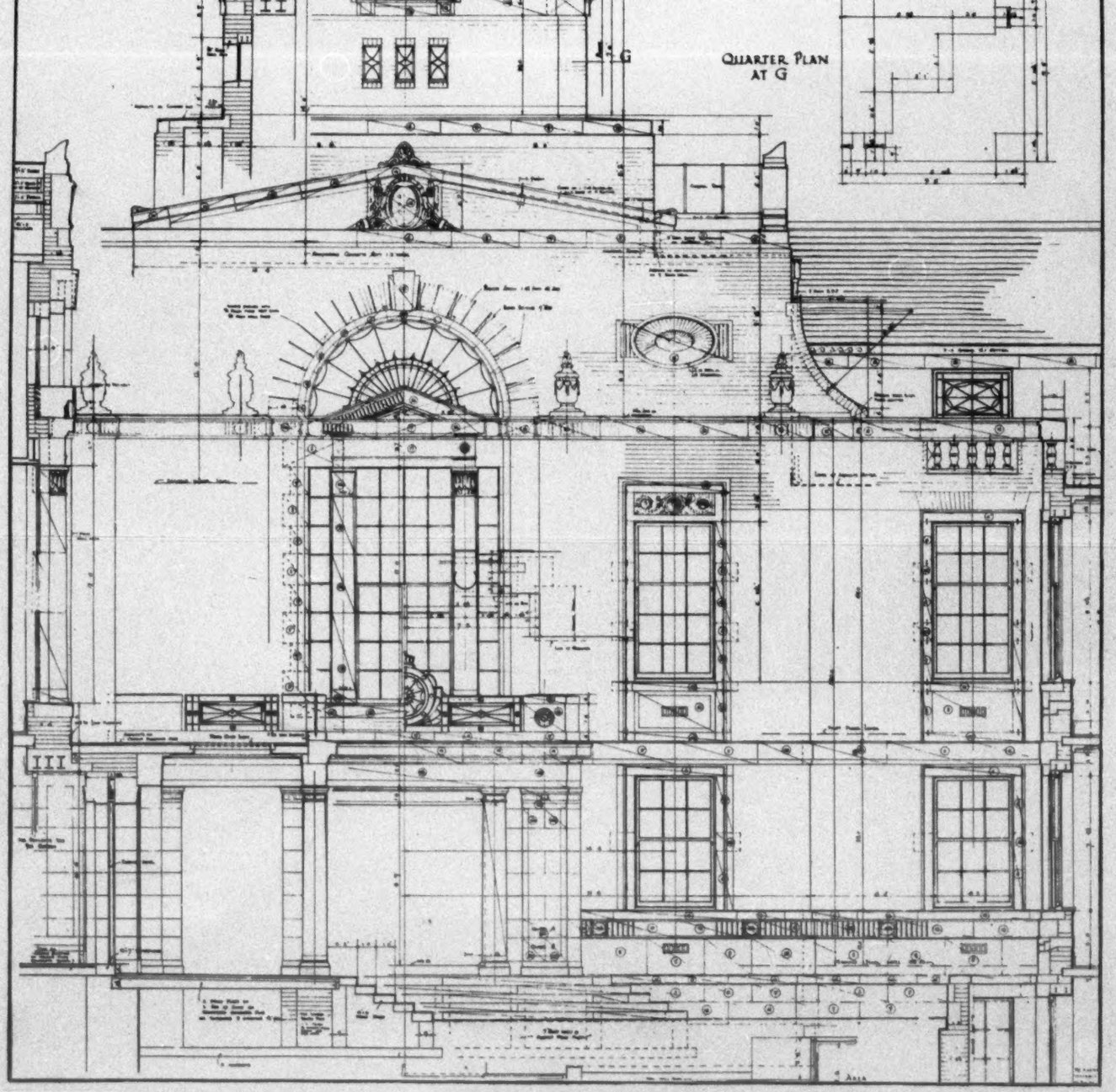
MESSRS. BRADSHAW GASS AND H



Offices, Stretford, Lancs.

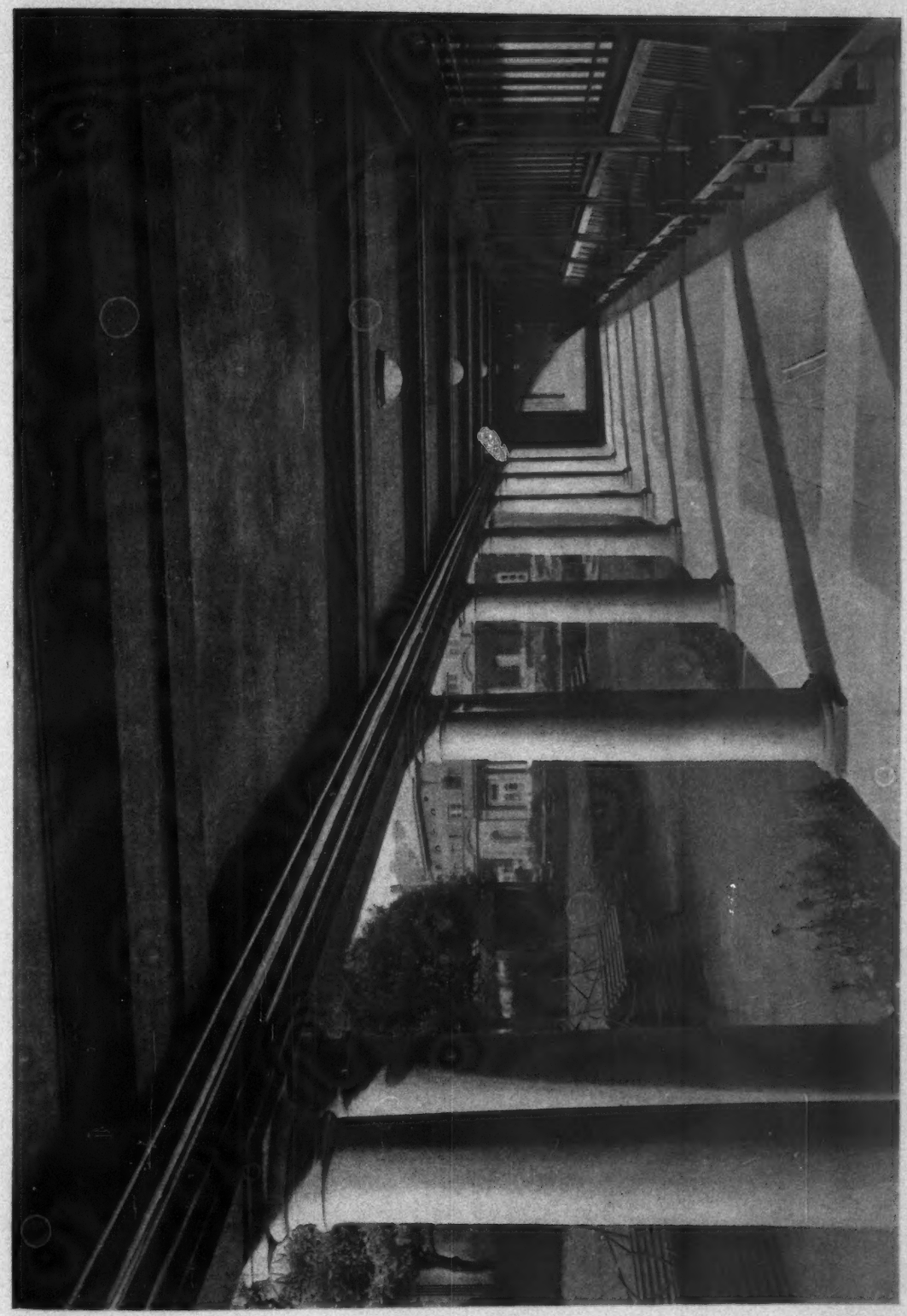
ASS AND HOPE, FF.R.I.B.A., Architects.


NOTES:-
COMMON BRICKWORK IN CEMENT
ENGINEERING BRICKWORK
NATURAL STONE
CONCRETE IN FLOORS & FOUNDATIONS
HOLLOW TILE FLOOR
ASPHALTE FINISH TO ROOFS
SLATES
STONE STEPS & THRESHOLDS
GRAY BRICKWORK IN CEMENT
COPPER FINISH TO ROOFS
A
B
C
D
E
F
G
QUARTER PLAN AT A
QUARTER PLAN AT B
HALF PLAN AT C
HALF PLAN AT D
QUARTER PLAN AT F
QUARTER PLAN AT E
QUARTER PLAN AT G

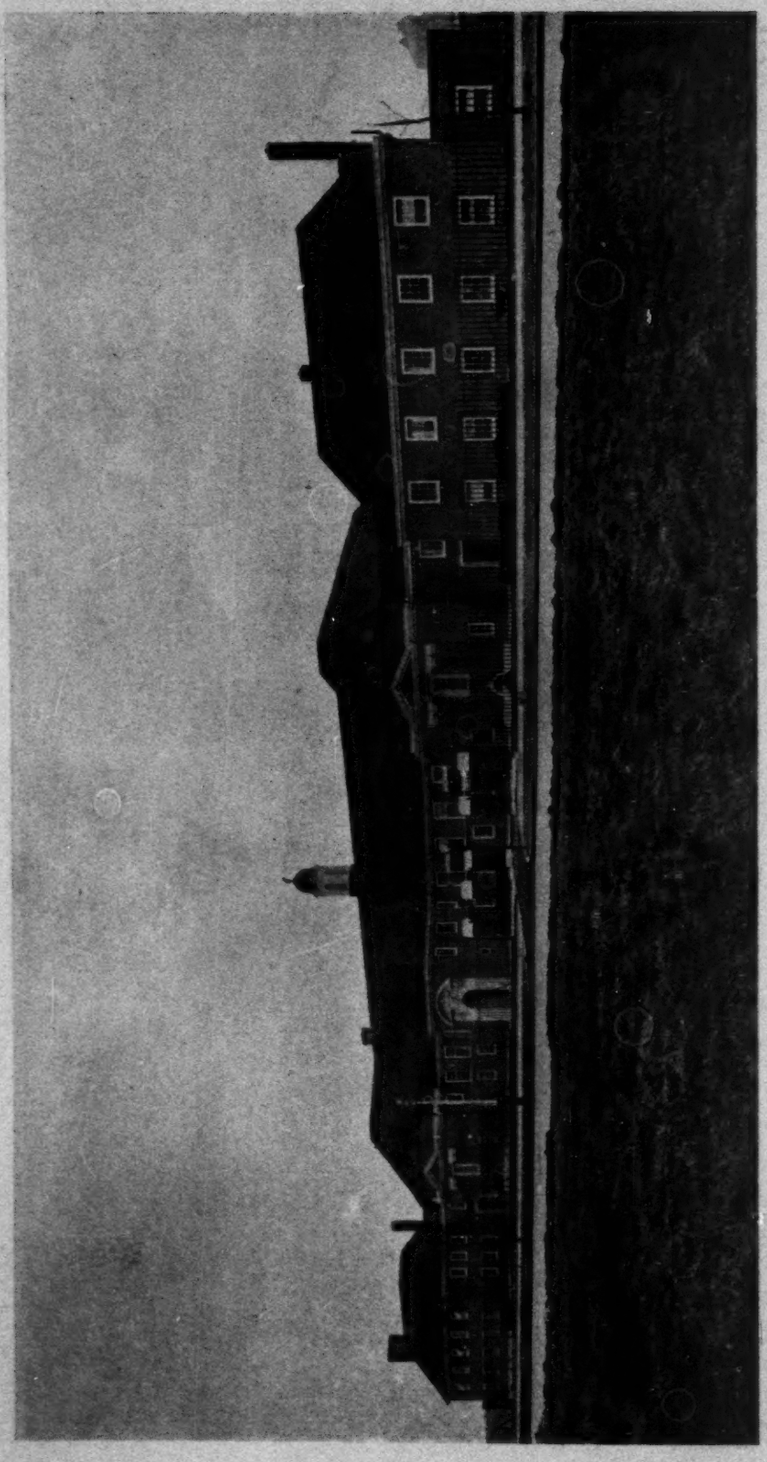


New Council Offices, Stretford, Lancs: Detail of Façade and Clock Tower.

MESSRS. BRADSHAW GASS AND HOPE, FF.R.I.B.A., Architects.

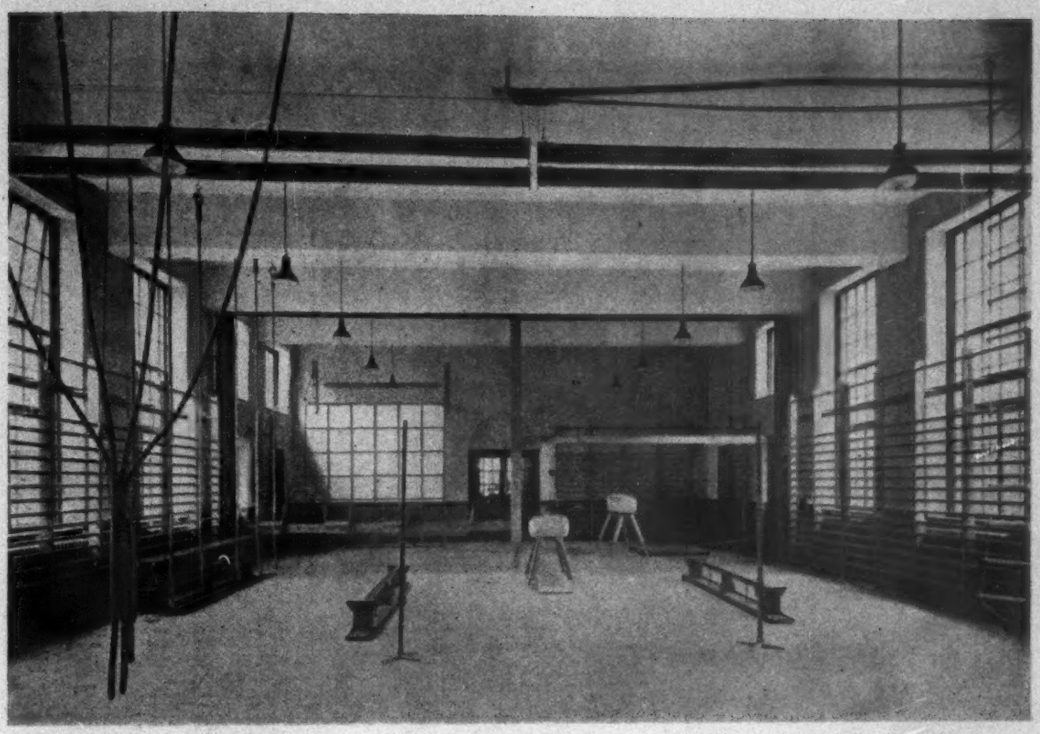


New Colonnade, Villa Marina, Douglas, Isle of Man: Inner Shelter.
Messrs. T. H. Mawson & Son (E. Prentice Mawson, F R.I.B.A.), Architects.

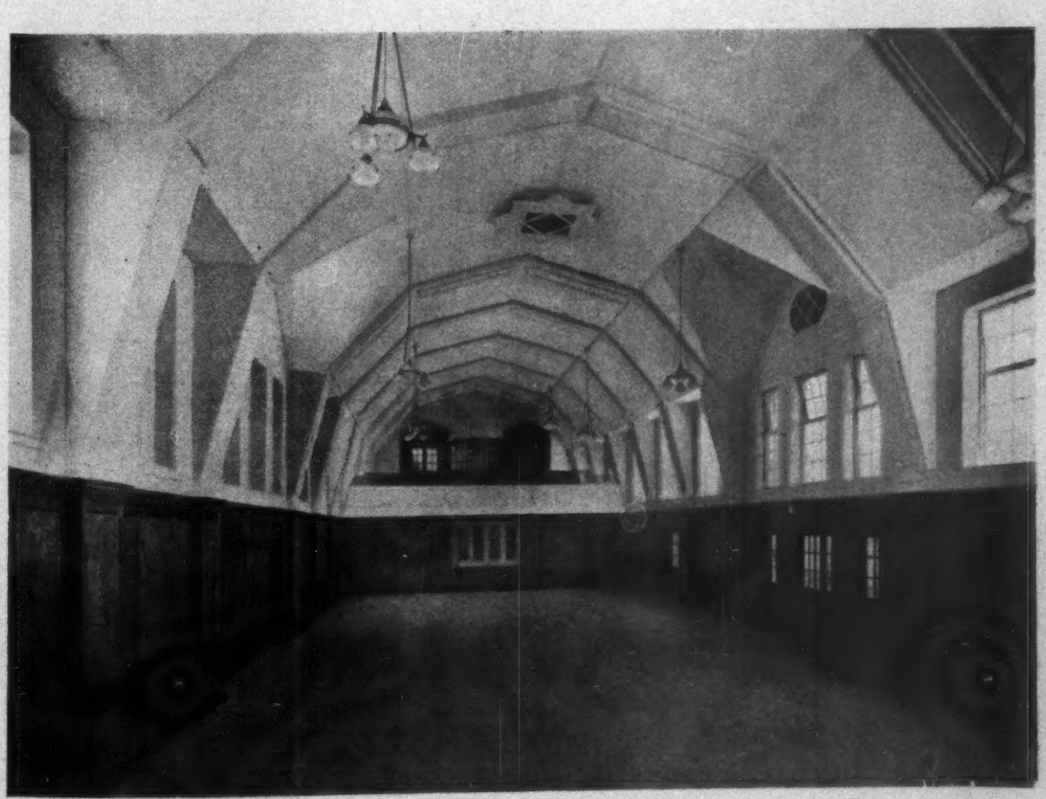


Edmonton County School.

Mr. W. T. Curtis, F.R.I.B.A., County Architect.



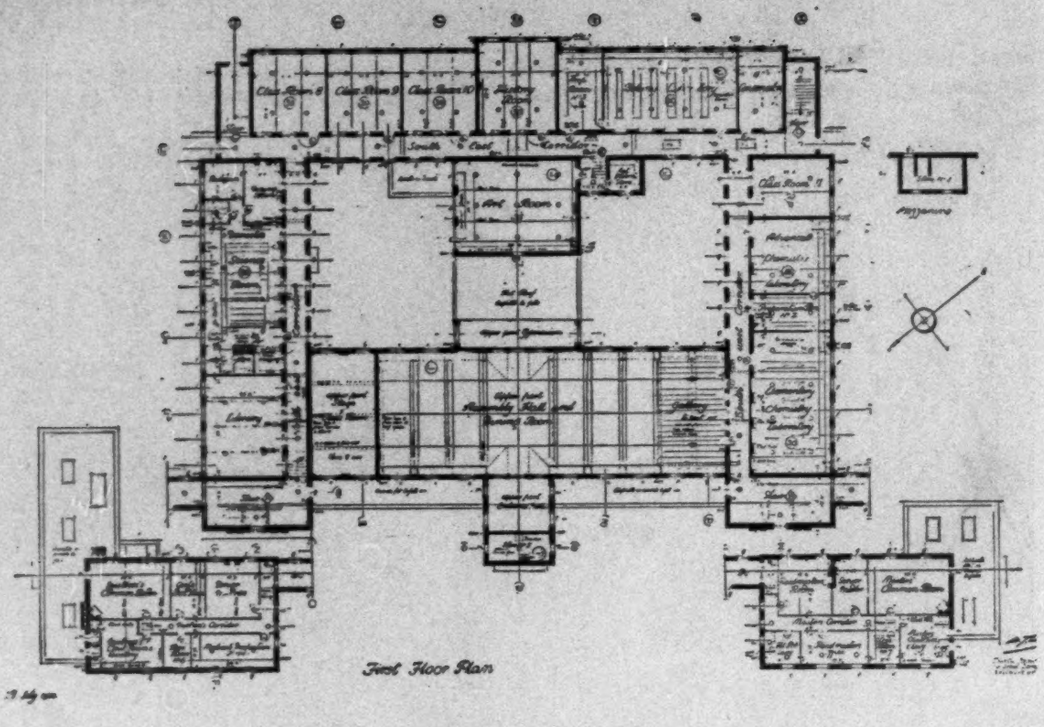
GYMNASIUM.

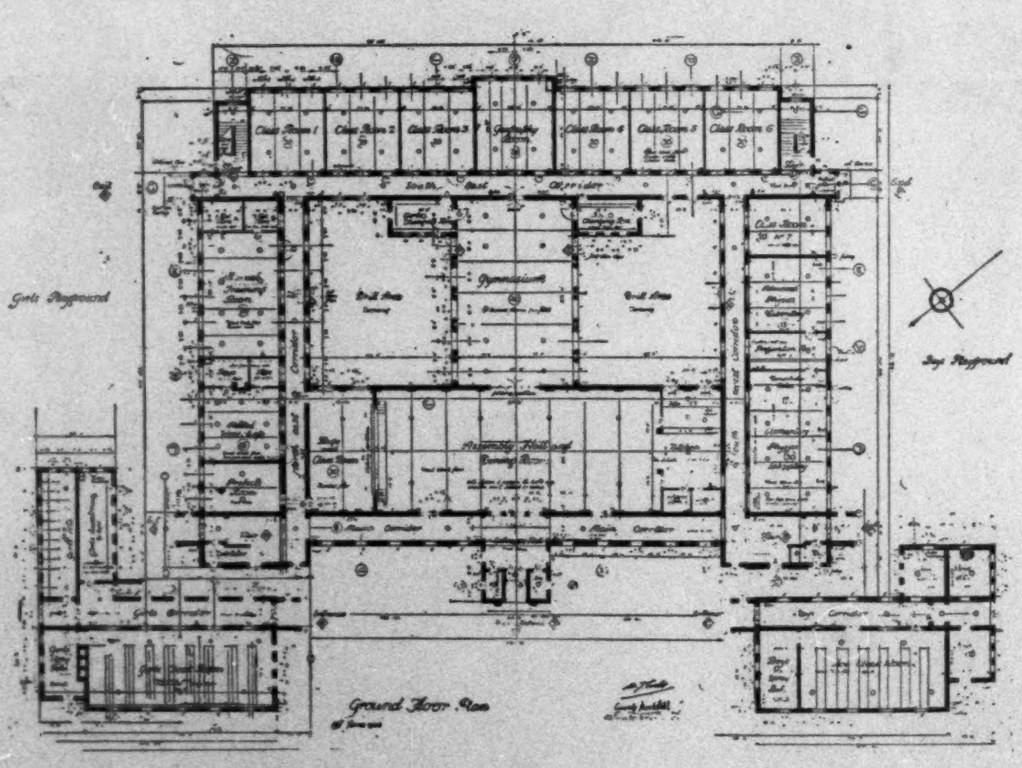


ASSEMBLY HALL.

Edmonton County School.

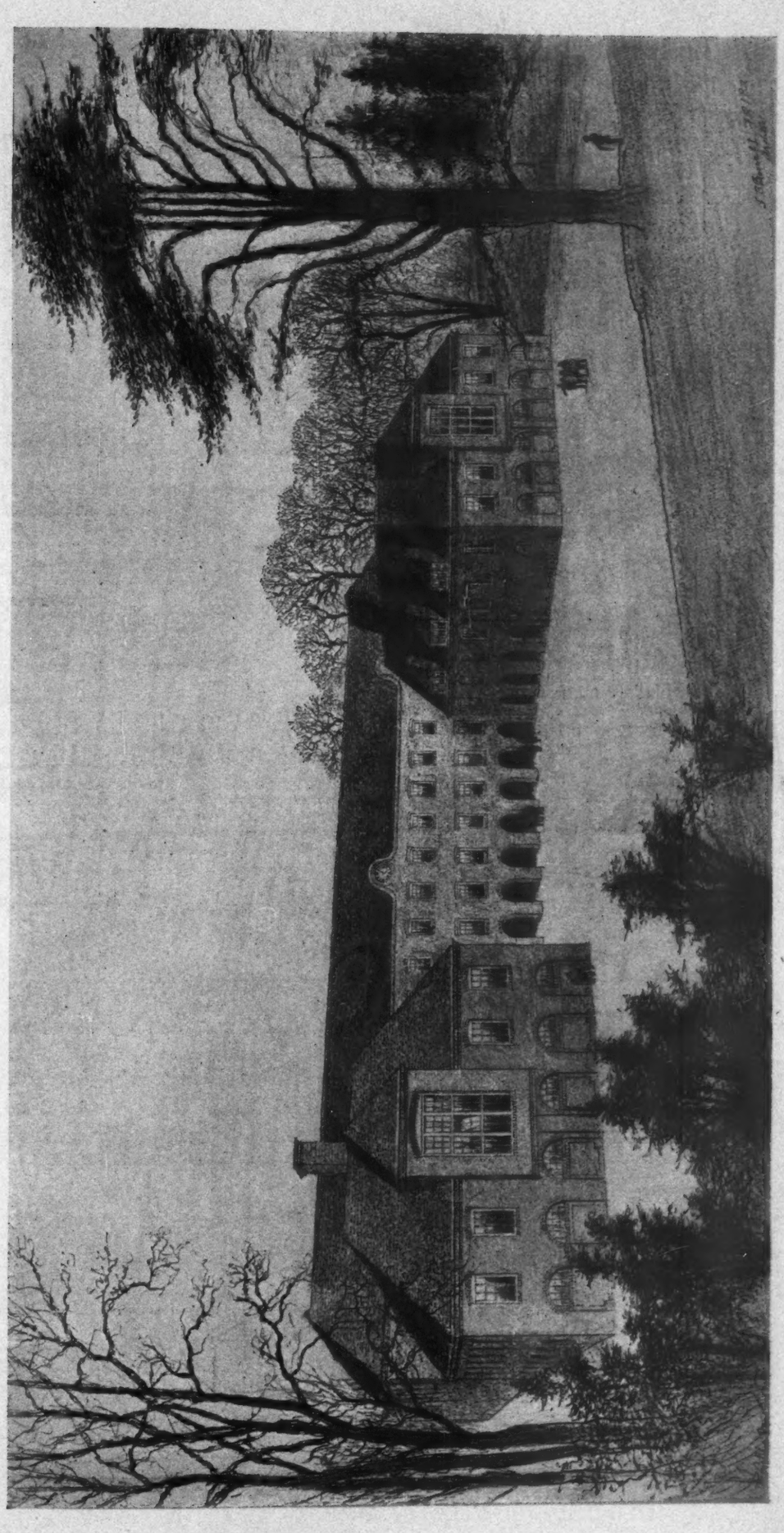
MR. W. T. CURTIS, F.R.I.B.A., County Architect.





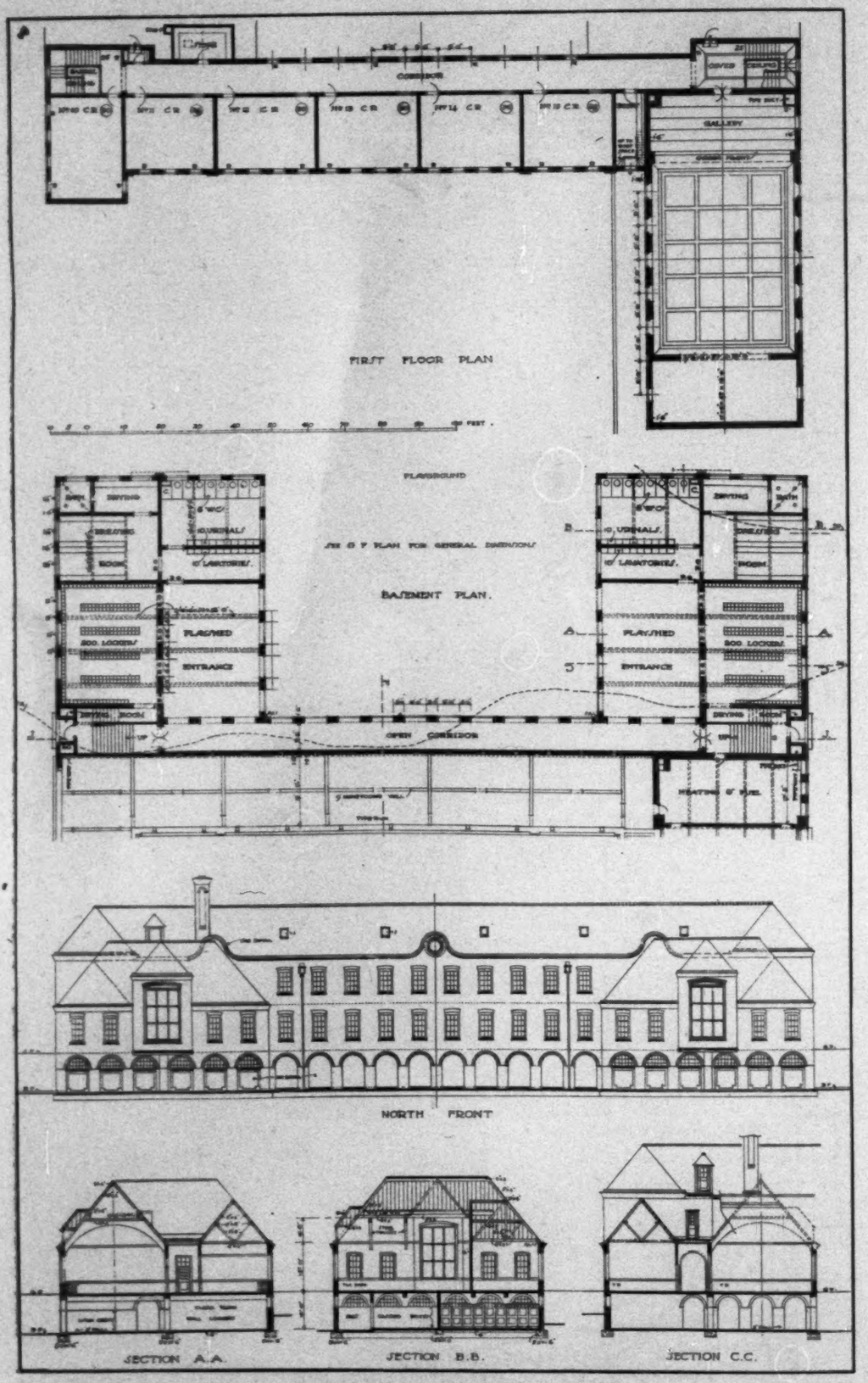
Edmonton County School.

Mr. W. T. Curtis, F.R.I.B.A., County Architect.



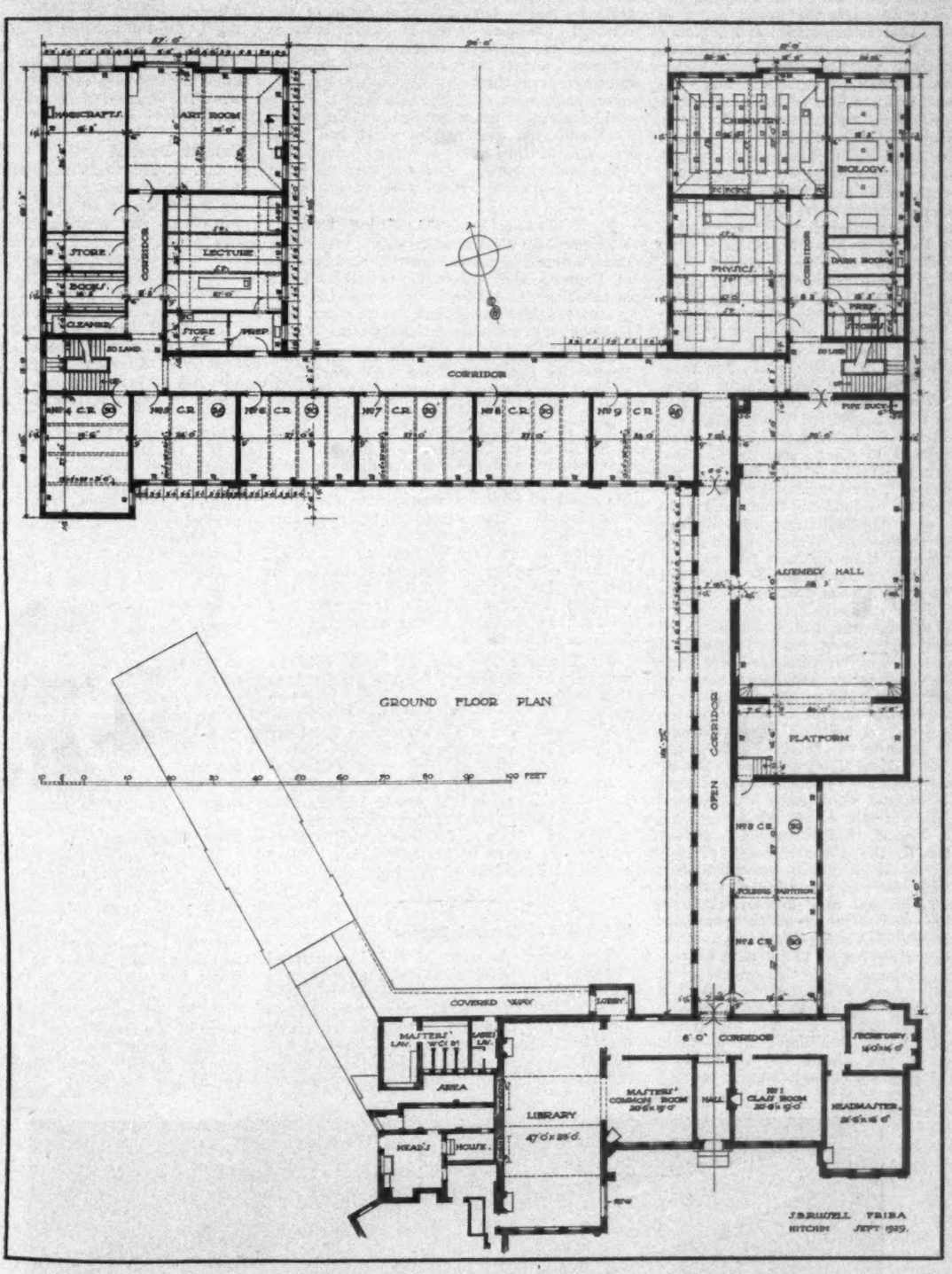
Hitchin Boys' Grammar School.

MR. S. B. RUSSELL, F.R.I.B.A., Architect.



Hitchin Boys' Grammar School.

Mr. S. B. Russell, F.R.I.B.A., Architect.



Hitchin Boys' Grammar School.

Mr. S. B. Russell, F.R.I.B.A., Architect.

PRESENTATIONS AT THE R.I.B.A.

PRECEDING Mr. Howard Robertson's paper on "London Street Architecture" (reported on page 910), there were two events of interest at Monday evening's meeting of the R.I.B.A. The first was the presentation of the London Architecture Medal and Diploma for 1930 to Messrs. Mewès and Arthur J. Davis for their building, the Westminster Bank, Threadneedle-street, E.C.; and the second was the unveiling of the portrait of Sir Banister Fletcher, painted by Mr. Glyn Philpot, R.A.

The President, in presenting the Medal and Diploma to Mr. Arthur J. Davis, spoke of the architectural merits of the building, illustrations of which were on view in the room, and congratulated the Westminster Bank upon having so fine a building.

Mr. Davis, in returning thanks, said he must, first of all, express on behalf of his partner and himself their deep appreciation of the honour which the R.I.B.A. had bestowed upon them, and of the cordial reception given them that evening. He must also mention the debt of gratitude owed to their clients, the directors of Westminster Bank, and their representatives, Mr. Monkton and Mr. Gale, who helped so much with the many problems of planning and organisation which they had to solve; also to all those whose efforts seconded them efficiently in the carrying out of their ideas. Architects, he continued, who in modern times had been entrusted with the designing of buildings under the shadow of Wren's great dome should remember their manners and conform in some measure to the standards which had been set by their famous predecessors. Here was no field for excessive originality nor for wandering through the untrodden paths of architectural experiment. He considered that the directors of Westminster Bank were not unwise when they instructed them to design their new building in a traditional style, remembering that on a portion of the site there stood a building of exceptional merit. He referred to the old Parr's Bank, formerly the Hall of Commerce (designed by the amateur, Moxhay), in which John Bright and Dickens spoke, which itself had replaced the Hospital of the Brotherhood of St. Antony of Vienna, which was built on the site granted to the Brotherhood by Henry III. Many of them would remember this building with its well-proportioned entrance doors flanked by the fine classical windows, over which a bas relief—since presented to the London University—gave distinction. At one time they hoped to be able to preserve this building, but the widening of Threadneedle-street and the necessity of alteration for the extra accommodation required by the bank, made this impossible. The present design was based in its main conception on the façade of the Massimi Palace in Rome, although it was in no way a copy of Peruzzi's well-known façade. It was rather an attempt to capture some of the classical spirit and refinement of detail which characterised that delightful building than to resuscitate a former example. That they had not been entirely unsuccessful was indicated by the appreciation that Institute had shown them, and he hoped that the distinction would encourage some architects to realise that the thin flame of the classical tradition must be kept burning through the various changes and passing fashions, as it was kept alight in this country, even through the Gothic Revival, when such men as Soane, Cockerell, Barry and Decimus Burton carried on the noble work and gave us examples which had stood the test of time and compelled admiration when other works which enjoyed a more fleeting popularity were now forgotten or ignored.

Mr. W. T. Ford, Assistant General Manager of Westminster Bank, said Mr. Davis's firm had also designed their branches at Brussels and Antwerp, as well as their head office at 41, Lothbury, and he congratulated Mr. Davis, and his partner, Mr. Gage, on the success of their work.

Mr. H. Holloway (of Messrs. Holloway Bros.—the contractors for the work) expressed the pleasure it had been to be associated with so wonderful a building.

The President, in unveiling the portrait of Sir Banister Fletcher, said Sir Banister was the distinguished son of a distinguished father, and recalled that a new edition of his standard work on architecture had just been issued. The President referred also to Sir Banister's connection with the Corporation of the City of London, on which he had served with distinction as Senior Sheriff. He was an R.I.B.A. prizewinner, and, as President of the Institute, had brought to completion the campaign for Statutory Registration.

Sir Banister Fletcher, in reply, said he was very much obliged for the kind things that had been said about him. His two years in the presidency had been two years' hard labour, but, at the same time, a labour of love. His work would have been impossible without the guiding hand and wise counsel of that true friend of the Institute. Ian MacAlister, and he would include also the staff, the Assistant Secretary and the chief clerk. He would treasure the memory of the two years of his life which he had passed as President of the Institute.

The I.A.A.S. Annual Banquet.

The annual banquet of the Incorporated Association of Architects and Surveyors will take place at Lincoln's Inn Hall, with Sir Edwin Lutyens, R.A., the Association's President, in the chair, to-night (Friday). The Association's annual general meeting will be held at the Institute, 1, Wilbraham-place, S.W.1, at 2.30 p.m. to-morrow, December 5.

THE WEEK IN PARLIAMENT

Five-Year Programmes.

Mr. HICKS asked the Minister of Health whether it was proposed to take any action against those local authorities which had decided to reduce the schemes for house building below the number specified in their five-year programme.

Sir E. HILTON YOUNG said he did not know of any case in which such interference with the discretion of a local authority was necessary.

Default Powers.

Mr. G. HALL asked the Minister of Health whether any local authorities had been asked by the Ministry of Health to defer housing proposals; and whether he proposed to take any action under the default powers conferred by the Housing Act, 1930, against the local authorities who were neglecting their responsibility to provide additional housing accommodation in their district.

Sir E. HILTON YOUNG said that the reply to the first part of the question was in the negative. As regarded the second part, he was not at present aware of any instance in which he ought to consider default action.

Economy and Housing Schemes.

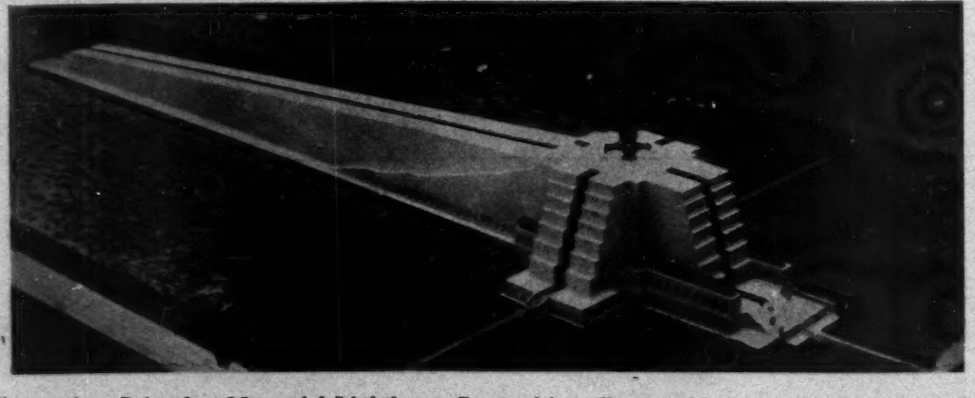
Mr. HARRIS asked the Minister of Health whether his Department had held up any housing schemes submitted by local authorities since October 1 on the grounds of economy; if so, what schemes were affected; and if there was any curtailment in the housing programmes of local authorities as a result of the economy policy of the Government.

Sir E. HILTON YOUNG said that there had been no instance of refusal to approve housing proposals on the ground of economy, but in present circumstances he had found it necessary to discuss with local authorities in certain cases some modification of their proposals with a view to securing the provision of a type of house which would be let at a lower rent than had been usual in the past. He had no information showing that local authorities had made any substantial curtailment of their programmes.

Slum Clearances.

Mr. SALT asked the Minister of Health if he could state the number of houses in England and Wales which were estimated to be dealt with under slum-clearance schemes as part of the Housing Act, 1930, during the five-year period commencing January 1, 1931; and how many houses had been demolished under this scheme up to October 31 last, or the latest available date.

Sir E. HILTON YOUNG said that the estimate made by the larger urban authorities provided for the demolition of 57,000 such houses. The number actually demolished up to September 30 last was 201.



Christopher Columbus Memorial Lighthouse Competition: From a Model of the Winning Design.

MR. J. L. GLEAVE, Architect.

LAW REPORT

CHANCERY DIVISION.
Before MR. JUSTICE EVE.

STREET IMPROVEMENT.—CLAIM AGAINST BOROUGH COUNCIL.

Foster v. Woolwich Borough Council.

This was an action in which Mr. Walter Lawrence Foster, Mr. Douglas Marley Foster, and Mr. Horace Gibbard Foster, estate agents, of Blackheath and Lewisham, where they trade as Foster and Foster, the owners of freehold land on which formerly stood 136 to 140, High-street, Eltham, and certain houses in Pound-place, Eltham, part of which had been transferred to the Woolwich Borough Council for the purpose of widening Eltham High-street, claimed damages against the Council for alleged breach of a covenant of July 30, 1928, to demolish the building, clear the land of all materials and rubbish, and to widen and pave the footway, and make up the road with all reasonable expediency.

Mr. Galbraith, K.C., and Mr. Blanco White appeared for the plaintiffs, and Mr. Morton, K.C., and Mr. Hodson for the defendants.

Mr. Galbraith stated that the negotiations for the land took place in 1926, and in July, 1928, it was transferred, the price being £1,000. The Council undertook to obtain vacant possession of the land and demolish the buildings and clear the site, so that the new building line would be available for plaintiffs' shops on or before November 8, 1928, and that they would proceed with the work of widening and paving the footway, and making up the road with all reasonable expediency, and without cost to the plaintiffs. The Council had obtained possession of the land, but had made delay in the paving of the footway, which was only partly done, and making up the road, where practically nothing had been done. Through this delay the plaintiffs had suffered substantial loss.

Mr. W. L. Foster estimated the loss that the plaintiffs had suffered at over £800 a year.

Mr. Morton, for the Council, submitted that on the true construction of the deed of July, 1928, there had been no breach of contract by the Council, but, if there had been any breach, no damages had been proved. What the Council covenanted to do was to demolish the buildings, and clear the land, so that the new building line would be free by a particular date. He submitted that the Council had done their part so long as they removed everything which prevented the plaintiffs erecting their shops. Plaintiffs could have built at any time. The Council's case was that it was not expedient to widen a street in patches, and that they had done the paving with reasonable expediency, having regard to the obstructions placed there by the plaintiffs' contractors. He further submitted that the damages claimed were too remote.

His Lordship, in giving judgment, commented on the fact that the buildings in question were very old buildings, and they were found to be in an unsatisfactory condition, and the defendants' engineer came to the conclusion that one of the walls would collapse if something were not done. He therefore decided to leave the chimney breast as a support. If this support had not been left, it would have been necessary to secure the wall. There were other interests to acquire besides the plaintiffs', and this took time. The widening of the road was accordingly a long process, owing to the various interests concerned. It could only proceed, if any regard was to be paid to expenditure, when a long and continuous stretch of the road could be completed, and it was a matter of uncertainty when the widening of a particular stretch could be put in hand. The question of whether or not there had been a breach of covenant fell to be determined on the construction of the covenant. Did the non-removal of the chimney breast, of which the plaintiff complained, involve a breach of covenant? The non-removal of the chimney breast did not interfere with the plaintiffs' building line, and therefore, in his lordship's opinion, the defendants were entitled to succeed on the construction of the covenant.

In any case, the plaintiffs would not be entitled to more than nominal damages, but, in view of the construction he had put on the covenant, the action on this issue must be dismissed. The plaintiffs alleged a cause of action against the defendants for not having made up and paved the footway with all reasonable expediency. But his lordship had to bear in mind that there had been many obstacles to be overcome by the defendants, and there was a long correspondence, which closed with a letter from the Town Clerk, explaining the position. Then the writ was issued.

Plaintiffs complained that they had suffered at the rate of about £800 per annum. The plaintiffs had contended that all reasonable expediency was with all reasonable expedition. His lordship did not agree. So long as the defendants acted reasonably was all he had to consider. There was no evidence that the defendants acted otherwise than reasonably, and they widened and paved the footway as soon as requested by the plaintiffs.

The plaintiffs had failed to establish any cause of action against the defendants, and he dismissed the action, with costs.

BOOK REVIEWS

The Complete Law of Housing, including the Housing Act, 1925, the Housing Act, 1930. By H. A. HILL, B.A., of Gray's Inn, Barrister-at-Law, Joint Author of "Hill and Oliver's Local Government Act, 1929." London: Butterworth & Co., Ltd., Shaw & Sons, Ltd. Price 25s. net.

This appears to be a really comprehensive work on housing, which furnishes the reader with all the legislation relating to the subject, carefully annotated with a table of statutes, a table of cases, and an index. Not the least useful part of the work is the introduction, which consists of five chapters, the first of which deals with the earlier history of housing legislation; the second contains a useful summary of the provisions of the Housing Acts; the third contains some critical observations on the Act of 1930; the fourth an analysis of the slum problem; while the fifth, which has been contributed by Mr. A. T. Pike, secretary of the Garden Cities and Town Planning Association, relates to public utility societies.

In the first of these chapters it is interesting to find that "Torren's Act," the Artisans' and Labourers' Dwellings Act, 1868, with subsequent amendments, was the forerunner of Part I of the Housing Act, 1925, and Part II of the Housing Act, 1930, whilst Cross's Acts, the Artisans' and Labourers' Dwellings Improvements Acts, 1875 and 1879, which enabled whole areas of structurally defective houses being dealt with, with powers of compulsory purchase given to the local authorities, were the predecessors of Part II of the Housing Act, 1925, now superseded by Part I of the Housing Act, 1930.

The criticisms of the 1930 Act have no party element in them, and we think they are instructive, but the author comments severely on the basis of compensation which, as he truly observes, appears to be the only instance in English law in which the amount of compensation is made to depend on the proposed user of the land when it is acquired by the local authority. It must not be thought, however, that the author attributes this to the Act of 1930, as his remarks are based upon the fact that the law remains practically unaltered. The late Government, as we have frequently pointed out, must bear some responsibility for this, for although they recognised some injustice which called for redress during the time they were in office, they took no steps to apply a remedy.

As regards the Government contributions under the new Act, the author regards the principle of basing contributions on the persons rehoused instead of a subsidy on the number of new houses provided as in theory an ideal basis, but he questions the desirability of varying rents in accordance with the personal needs of the tenants; and as regards the power to make allowances to displaced tenants, he questions whether the local authorities will often make use of this power and observes that that power could hardly have been expected in an Act which retains "the reducing factor" in the assessment of property compulsorily acquired. In the chapter on slum clearance, he also points out the effect the Rent Restriction Acts have in preventing landlords getting possession of worn-out houses which they desire to rebuild and the hardship which results by their having to wait either for the local authority to order them to clear the land or to acquire the land itself. That the author approaches the new Act in no narrow spirit may be gathered from his observation, "the proof of a new Act is in the working thereof, and too much speculation as to the merits of what is for better or worse definitely in being is apt to be unprofitable"; and he remarks that as the new Act will be immediately put to the test, two or three years should suffice to show its adequacy or inadequacy. We find these introductory chapters so interesting that we must guard ourselves from giving the impression that they form the main part of the work, but that is by no means the case, for they only occupy 33 pages at the commencement.

The main part of the work, which comprises 394 pages exclusive of the introduction and index, consists of the text of all the statutes unrepealed, with explanatory notes, and an appendix, in which will be found the Orders and Regulations and also some notes on the Acquisition of Land (Assessment of Compensation) Act, 1919. The author in his preface says it was originally intended also to include the text of the Lands Clauses Acts, but this proved impracticable.

The author appears to have an intimate knowledge of the housing legislation and to have placed that knowledge unreservedly at the disposal of his readers, and although we cannot quite grasp the point he makes at page 92 as to the effect of section 7 of the Acquisition of Land Act on section 46 of the Housing Act, 1925, in view of the intervening repeals, we are inclined more to question our own legal acumen than that of the author. We consider that this volume provides one of the most valuable guides to this complicated but very important subject.

Georgian England. A Survey of Social Life, Trades, Industries, and Art from 1700 to 1820. By A. E. RICHARDSON, F.S.A., F.R.I.B.A. London: Batsford. Price 21s. net.

In his preface to this book Professor Richardson says: "An endeavour has been made to present an intimate picture of life, work and the arts in England between the years 1700 and 1820." Professor Richardson's enthusiasm for and knowledge of Georgian art and craftsmanship is well known. In the volume before us he inspires his readers with his own enthusiasm and carries them through the life, work and art of Georgian England in an entertaining manner. He has sifted the large amount of material available, selecting the most suitable and appropriate. We have heard much of the good old days, and the following extract is of interest in that connection: "Gentlemen's houses near London with coach-houses and stabling could be had at a rent varying from £40 to £50 a year. At Mortlake a good brick house was going for £6 10s. a year." Chapters which will appeal to our architectural readers are those dealing with the smaller town house, with many illustrations. The following advertisement published in the reign of Queen Anne is interesting: "To be let, a New Brick house after the Newest Fashion, the Rooms wainscotted and painted, Lofty Stories,

marble Foot paces to the chimneys, sash windows, glaised with fine Crown Glass, large Half Pace stairs that 2 people may go up on a Breast, in a new pleasant Court planted with Vines, Jessamin and other Greens, next door to the Crown near the Sarazen's Head Inn in Carter Lane near St. Paul's Churchyard, London." It would be interesting to know if this desirable house still stands. Chapters on the building crafts are equally instructive and entertaining. They deal with masonry, brickwork, tiling, slating, ironwork, lead, glass, plasterwork, etc., with illustrations of typical work of the period. The art section shows life in the home, coffee house, and inn, with many illustrations by Hogarth and Rowlandson. The volume is amusing, instructive and entertaining. A pleasant hour may be passed in conning its pages and illustrations. Of the latter there are some 260.

The Works in Architecture of Robert and James Adam. Vol. I. London: John Tiranti & Co., 7, Maple-street, Tottenham Court-road.

For those who want a handy reference to the works of Robert and James Adam, this reprint will be welcome. The Vol. I before us is a folio in a cloth cover which contains several subjects typical of the Adam style and will provide a useful form of reference. The subjects are Sion House, Kenwood, Luton Park, some public buildings, and designs for ceilings, gates, chimneys, etc., for the King and Queen, and these subjects afford a sort of epitome of the kind of design put forth by the Adam Bros. The price is only seven and sixpence, and the book should make a useful addition to the architect's library.

MODERN DECORATION

A LECTURE on this subject was given at South Kensington on November 19 by Professor A. E. Richardson, F.S.A. After some general introductory remarks, the lecturer said it was his object that afternoon to put before them the lessons of so-called "modern art," to deplore the unfortunate name it bore, and to press that however "modern looking" some of its creations appeared, it was at least a recognition of the great period of transition through which the world was passing. That it was a force was undeniable, but it must be rightly handled. It must be recognised that the hands of the clock could neither be set back nor set forward. Decoration, if it was to be of permanent value, must advance slowly. We were faced with the problems of town life and the gradual passing of the countryside. We had to accept conditions of transport which were welding the country into a series of suburbs. There was the desire to do away with petty labour, to simplify ways of living, and to cheapen the cost of building. Town life with its comfort blinded us to the dictates of climatic conditions. We were giving up fireplaces and we were advised to sweep away the myriad articles we used to delight in. The tendency was for cryptic impressions rather than for more permanent convention. In the place of the trivialities that used to amuse us we were advised to substitute strange decorations because they were novel and different. The new movement had produced a great variety of designs for interiors and furniture. We had the cocktail style, the cinema style, the floodlit style, and the motor accessory style. Furniture designing ranged from the megalithic to the skeleton styles. Then we had the shopfront style, generally in black and silver and funereal looking; and finally the jazz style. The foregoing were thought to be serious contributions to the Modern Movement. The exponents of these artistic diversions had worked up a massed attack on everything that did not conform to their uncertain standards. No matter whether the works of living architects were good, bad, or indifferent, if such works had any traces of tradition they were denounced. In the meantime a few artists continued to draw and paint accurately; a few decorators were content with good plain backgrounds and floor coverings; some furniture makers, such as Romney Green, Robert Lutyens, and others, continued to endow pieces of furniture with grace and beauty. In this parade of design and taste direction, mainly echoing the one-sided Continental angle, Dutch, German, French, or whatnot, there was too much regard for professional reputation, too much trumpeting of the new. The "modern" had become more and more obviously modern. But what surprised the public was the archaic character of the things labelled modern.

Those who thought about the subject of furniture and decoration with more than ordinary attachment might have similar thoughts to the following:—

(1) It was obviously impossible to devise a formula for art and to expect different minds to accept taste direction. Fashion might play a part for a time, but fashion was fickle. It could be said that public opinion ultimately determined the fate of an art movement. In England there was real appreciation for things made by hand and for things manufactured from natural materials.

(2) The new was ever formed out of the old. This, if rightly interpreted, meant skilful evolution—intelligent and reasonable development.

(3) The dread of an inferiority complex had led to a frenzied rush to be in the fashion. This was true of nations and of individuals.

(4) The so-called "modern" in art attempted to apply machine expressions to everyday things.

(5) The revivalist of other times attempted to apply the styles to everyday things. Both theories were wrong.

The surest way to encourage a movement was to attack it. The modernist had made a similar mistake in attacking what was indiscriminately termed "pastiche." All were agreed that the pseudo-antique was a vain thing and a good many were agreed that blind adventures would lead nowhither. What course of action was open? This was a difficult question to answer. It was surprising that the good qualities of both schools of thought were not rightly adjudged. The first attribute of good decoration was graceful structure. This depended for its success on the skilful handling of material. Secondly, colour. In this a general and harmonious effect with one dominant tone was the best. Thirdly, simplicity and restraint in detail. There should be scope for individuality in small things, such as the door and window furniture; the key, for example, should be given as much study as the selection of the surface material or the stuffs. Substitute materials which were suited to the coachwork of motor-cars, imitations of silver, of ebony and of ivory should be avoided. Rare woods of infinite variety could be obtained, and so could veneers. Reconstructed woods, such as plywood, were admissible. Radiators and hot-water pipes should be concealed. The opening of windows for cleaning and ventilation should be considered. There should be a just balance between fenestration and wall surface. In this climate it was just as faulty to overwindow a room as it was to make it like a prison. A room or a hall properly designed should not demand continual redecoration. Waxed surfaces were better than those which required periodical cleaning. The treatment of the floor should harmonise with the walls and the ceiling. There were many ways in which wood blocks or parquet could be combined in simple patterns. Small pictures, as a general rule, should be avoided—they spotted the wall. There was, however, scope for a variety of well-drawn and well-composed scenic wallpapers. The excellent wallpapers manufactured in England, and copied in Sweden and other countries, were not to be despised for walls. Glass in decoration should be used sparingly. While it was true that novel effects could be attained from glass panels and ingenious lighting of surfaces, the result was apt to be forced. Furniture should be simple in line, human in scale and colour and sympathetic to the room. Set furniture arrangements were a bore. When a room was arranged according to plan it became tiresome. The ideal was just sufficient and no more. Plain stuffs, real leather, woven materials were to be preferred to pyrotechnic displays. The whole apartment should be restrained, whatever its purpose. If indirect lighting was introduced care should be taken to keep the glass strips free from dirt; there should be plenty of plugs at the floor level for standard lamps if required. The observance of these and similar principles would result in the forming of the nucleus of an up-to-date system of decoration which would combine the dignity of the past with the economy which was a concomitant of beauty.

The conditions of travel had influenced the design and decoration of aeroplanes, ships, railway carriages, motor-cars, and all vehicles intended for passenger traffic. It was natural, therefore, that in an age of travel some reflection of these tendencies should be manifest in the interiors of buildings where the population congregated in large numbers. In public halls, theatres, cinemas, stores, picture galleries and libraries, simplicity of treatment and a feeling of space were essential. The people in the auditorium should furnish the interest when the lights were on. The stage should hold attention when the house was in darkness. This first principle was apt to be overlooked. In large halls, vestibules and corridors there was scope for fresco decoration on the grand scale. The designer should consider the use of marble for walls and floors and of wood for ceilings. He should inspire those who used his building with the thought that people mattered, not patches of bizarre decoration or sculpture. This was the ideal aimed at by Otto Wagner in Vienna thirty years ago. At the same time people were always interested in beautiful detail in matters such as metal fittings.

To prove that a general formula for design and decoration was not possible, we had the important branch of church decoration. Here it was imperative for designers to work in sympathy with the great traditions of the Christian Church. Mr. Comper, Mr. Eden, and others had proved by their contributions to Church art that it was possible to evolve from tradition rather than to break with it.

In the course of a long and varied experience as a practising architect and as a teacher he was convinced that the art of the future would develop on the lines indicated by the Swedes and the Danes. The outlook in these countries was analogous to that of the eighteenth century. He was equally certain that Church art, as practised in England and imitated in America by the successors to the late Charles Goodhue, was assured of a future. The art of to-day should be more closely related to craftsmanship, not of the arty-crafts type but of the order that allowed the human touch. That this need was recognised was evidenced by the existence of the Guild of Art Workers, of the Central School of Arts and Crafts, of the Royal Society of Arts, and the Design and Industries Association. Personally he attached faith to the Morris-Lethaby theories and practices. English craftsmanship was the finest in the world, but it was swamped by mass production of a very low order. The merit of the so-called "modern movement" was its desire to encourage economy in art expression. In its self-conscious moods it became ridiculous, but it must be recognised as a force, and all that was good in it should be appropriated and combined with first principles which were as unalterable as the laws of the Medes and Persians.

SOCIETIES AND INSTITUTIONS

R.I.B.A. PAMPHLET.

The 1931-1932 edition of the R.I.B.A. pamphlet, "Membership of the R.I.B.A.," has now been published. Copies may be obtained from the Secretary, R.I.B.A., price 1s. each, exclusive of postage. The pamphlet, in addition to containing information regarding the examinations and membership of the R.I.B.A., contains full particulars with regard to architectural training, scholarships available at the Schools of Architecture recognised for exemption from the R.I.B.A. Examinations, a selected list of books on architectural subjects, etc. Maps showing the local distribution of facilities available for architectural education in England, Wales, Scotland and Ireland are an important feature of the pamphlet. These maps are accompanied by lists of schools throughout the countries and by a schedule showing the local distribution of facilities. This schedule gives the R.I.B.A. Allied Societies and their provinces and states the educational facilities available in the area of each Allied Society.

FACULTY OF SURVEYORS OF SCOTLAND.

The following candidates have passed the recent examinations of this Faculty, viz.:—

Preliminary Examination—
William F. Wright, Chryston.
Andrew C. Wilson, Paisley.
Jack W. Stirling, Glasgow.
J. Carson, Glasgow.
J. M. Murray, Glasgow.
A. R. H. Allan, Haddington.
A. D. Murray, Edinburgh.
Ian Thorburn, Edinburgh.
Two other candidates had partial passes.

Professional Examination, 1st Division—
Hugh McDermid, Glasgow.
William Fyfe, Glasgow.
W. A. Adamson, Edinburgh
Joseph T. O'Neill, Glasgow.
George M. Macintyre, Glasgow.
F. McLennan, Glasgow.

Professional Examination, 2nd Division—
George Foote, Glasgow.
Robert M. Hutchison, Dunfermline.
Alex. P. Craig, Glasgow.
P. Wyper, Motherwell.
Wm. F. McNaught, Edinburgh.
J. Wilkie, Glasgow.
George D. Mowat, Glasgow.

INSTITUTION OF STRUCTURAL ENGINEERS.

A PAPER on "Submersible Bridges" was read by Mr. R. P. Mears, M.Inst.C.E., M.I.Struct.E., to this Institution on December 3.

A submersible bridge, said the lecturer, was a bridge purposely arranged to be below the level of high floods, and so designed and constructed that high floods might pass over it without damage to the structure. The idea of deliberately building an important bridge with its roadway below high tide or high flood level would, under the conditions of Great Britain, be preposterous. But, whereas rivers in Europe flow more or less constantly throughout the year, and very seldom reveal dry river beds, rivers in India normally (November to May) reveal river beds dry on their surface, but saturated below and with a small perennial flow. Now the outstanding features of the river flow were the great height of the floods and their short duration. Therefore, by so constructing bridges as to render them proof against the effect of floods passing over them, approach embankments and land spans were avoided, and height of piers and abutments economised. Thus, the difference in cost between a high level and a submersible bridge might be as much as half the cost of the complete high level structure, with the additional advantage of freedom from maintenance, worry and expense in connection with approach embankments, approaches to submersible bridges being either at ground level or, preferably, in cutting. The sole disadvantage in the submersible bridge was that during high floods the bridge could not be used, and that occurred only during a few days out of the whole year.

In order to construct a bridge that would be proof against the effects of submersion, it must first be well founded, so that it might successfully resist the lateral thrust due to water pressure, and also be proof against the effects of scour; scour being much aggravated by the obstruction to flow caused by the bridge. A bridge of this type should be heavy and massive, and devoid of any perforations or pockets in which floating debris could lodge. Spans should be moderately large, so as to let floating trees, etc., get through, and the handrail must either be collapsible or removable, so that at times of flood it should offer no resistance, otherwise it was liable to get torn off by trees or collections of brushwood as well as offering increased obstruction to the flow of the river.

"Due to the above considerations, many bridges of the submersible type have been built in Central India. The materials generally used and most suitable are brick, lime, concrete, masonry, reinforced concrete, or a combination of these materials. The barrel type arch backed in plum lime concrete is the most usual and suitable type, since it provides the necessary mass and weight in local materials and at cheap cost. Steel bridges are not suitable owing to their being too light in weight, and, of course, lattice or open work of any type will not do. Since lime of excellent quality is obtainable throughout Central India, most small bridges of this type are very economically built in either lime concrete, brick in lime arches, or masonry in lime arches."

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Mr. Stephen Simpson presided at a meeting of Associate Members of this Society held at the Leeds College of Art on November 26, when Mr. F. F. Johnson, who lately won the Society's travelling studentship, gave his impressions of Vienna and Prague, with numerous illustrations. The lecturer remarked that, apart from the churches of Vienna, which showed the characteristic faults of German Gothic, by far the most interesting feature of the city was its Baroque architecture. There were, owing to the formerly unsettled state of the country, few examples of the earlier Renaissance. Baroque was the plaything not of the emperor but of his courtiers, who had made Vienna a city of palaces; though there was one church, St. Peter's, built about 1722, which was a charming example of Baroque. Here one found the dome, an elliptical one, used as a covering, not for the crossing, but for the nave. As to the palaces, they had rusticated basements with monumental doorways, and above these two or three stories having a marked horizontality, and a highly enriched cornice crowning the composition. Above these came steep roofs covered with tiles of a lovely red tone. Amid such surroundings one could not forget that the world's masters of music had lived and worked. Most of the rooms of these palaces were heated by the typical Austrian stove, burning wood, which was stoked from the exterior of the rooms.

Very little had been heard about the architecture of Prague, though, to the speaker's mind, this was a more romantic city than Vienna. Nowadays it was simply rampant with architectural experiment, which was ruining the aspect of that beautiful city. The square of St. Wenceslaus showed a terrible gamut of architectural styles and had now only one of its old Baroque palaces remaining as a pathetic reminder of a more cultured past. Most of the new work showed a marked departure from Continental traditions, in the sense that the sliding sash had almost ousted the double casement. Plate glass was all the rage in Prague—huge desolate sheets of it, shorn of any subdivisions.

Short papers on their travels in France and Italy were afterwards given by Messrs. A. Tattersfield and W. Bailey, gainers of "William Nicholson" travelling scholarships, controlled by the Society.

LIVERPOOL UNIVERSITY.

Some comments on present-day architecture were made at Liverpool University in a public lecture by Mr. Francis X. Velarde, A.R.I.B.A. The greatest enemies to modern architecture, he said, were those untrained, uneducated designers who, realising the advertisement quality of novelty or strangeness, sought to cull commercial success for themselves and their clients by giving their buildings a profusion of ill-fitting motives taken from every modern building the Continent of Europe had produced. With the beginning of the nineteenth century there commenced the great cult of the sham and the antique. Just as England was the industrial leader, so she was the great exponent of sham architecture. Our architects still veneered great steel-frame buildings with stone in the manner of Romanesque and Italian Renaissance and of Victorian architecture, with a fanciful taste which mocked our age. Our town was full of them, some few æsthetically controlled, but the majority dull and ill-proportioned things. The elevations might almost be the work of engineers and not architects.

Our great schools of architecture were still young; yet the time was not far off when we should see through the schools' work a renaissance of good taste—even though schools alone could not make artists. Architecture was an art and not an exact science. A knowledge of the spirit of all that had gone before was necessary for the designer; but we had to-day an abundance of new building materials requiring the strictest æsthetic control if their use was not to pall.

THE INSTITUTE OF BUILDERS.

During September and October a party of 33 persons, members of the Institute of Builders and friends, made a tour of the United States and Canada, which must be set down as a great success. The leader of the party was Mr. R. A. Costain, and the other members included Sir Stephen Easten, Messrs. G. F. Symes, J. G. Gray, W. H. Jones, E. C. Holloway, R. E. Holloway, C. W. Hacking, E. W. King, W. F. Thornton, R. H. Tribe, and W. B. Wood. The party set sail on the *Aquitania* on September 19, and after a pleasant crossing landed at New York on September 25, where they put up at the Hotel New Yorker, a welcome being afforded by the Management Division of the Real Estate Board. The next day the party heard addresses by Mr. Raymond Hood, the architect, and Colonel W. A. Starrett, of the firm of builders of the Empire State Building, after which an inspection of the building and plant was made. Before the party left for Washington on September 30 they visited the Stevens' Institute of Technology at Hoboken, where Mr. Robert G. Post (vice-president of the firm which is handling the steel construction work of Radio City) gave an address, and also paid visits to most of the principal buildings in the city.

Arriving at Washington, a tour was made of the city, special attention being given to the new British Embassy. A visit was also paid to the Bureau of Standards, where an address was given by one of the directors on the American building industry.

Pittsburg was reached on October 4, where the principal event was a lecture on Steel Problems in relation to the building industry. Steel works were visited, and after a three days' stay the party left for Chicago, where the principal buildings and industries were examined. Detroit, where the Ford Works were inspected, and the Niagara Falls were also visited before the party passed into Canada—Toronto, Montreal and Quebec being the chief cities visited. In these centres the principal buildings were inspected. The party embarked on the *Aurania* for London on October 15, arriving on October 25.

Reference to the trip is made in our "Notes" pages, but it is opportune here to state that wherever the party went, in U.S.A. and Canada, every opportunity and facility was afforded by architects and builders to examine office and job administration, and that most cordial hospitality was accorded by organisations of architects, building owners and builders at stage points on tour.

HOUSING AND TOWN PLANNING LEGISLATION

The first of a series of four lectures on Housing Legislation and the Town Planning Acts was delivered before a meeting of the London and Home Counties Branch of the Incorporated Association of Architects and Surveyors, at the Institute, 1, Wilbraham-place, S.W.1, on November 25, under the chairmanship of Mr. A. E. Mander (chairman of the branch).

The lecturer was Mr. Leslie Maddock, barrister-at-law, who commenced by saying that he would endeavour to describe the way in which the State came to participate in the construction of houses in this country and the gradual development of modern housing policy. The origins of the problem were fundamental in this respect at any rate, that they were rooted in the great industrial revolution of the last century, which created not merely a new England, but a new world. It was not surprising, therefore, that the housing problem had been almost as universal as the trade depression, for practically every country of an industrial character had experienced similar difficulties. It was not difficult to realise the effect on housing of a transformation quickening after 1840 from an industrial system scattered along streams or located near waterfalls, partly rural in character, to a system concentrated on coal areas with large works and greatly increased production. Working conditions soon became so appalling as to shock the religious sentiment of the time, and a great fight, backed by religion, began in earnest over the Factory Acts in 1819 and continued until 1847, when the Act generally known as Shaftesbury's Ten Hours Act was passed. That religious idealist also succeeded in 1851 in passing two measures, the first the Common Lodging Houses Act, providing for the supervision and inspection of lodging houses by the local authority and the imposition of certain statutory by-laws. The second measure, the Lodging Houses Act, empowered certain local authorities to erect public lodging houses at their own expense, but the principle of permitting Government loans to be granted for this purpose to municipal authorities was not introduced till 1866, fifteen years later, during the whole of which period no further advance was made.

The first step of real progress made, in 1868, the Artisans and Labourers Improvements Act, better known perhaps as the Torrens Act, was confined to the problem of individual insanitary houses, but provided the foundation of all the subsequent legislation under this head. Its application was limited to towns and boroughs, and enabled the local authority on the recommendation of the Health Officer, who was to be appointed, or on the application of four householders to close or repair any house adjudged insanitary at the owner's expense where the owner would not place those premises in a proper condition, and to obtain Treasury loans for that purpose. That Act was supplemented in 1875 by the Artisans Dwellings Act, the first considerable measure dealing with the problem of slum clearance. Its principles were applied to Scotland by a separate Act in the same year. Under the Artisans Dwellings Act the local authority was empowered to secure by compulsory purchase at a price to be fixed by arbitration an area adjudged to be in an insanitary condition by that authority after a representation had been made to this effect by the Medical Officer of Health, or by two Justices of the Peace or by twelve ratepayers. If the local authority were satisfied that the district was unhealthy and the only possible remedy an improvement scheme, it might acquire the land so long as it provided dwellings for the displaced population as far as possible within the same district. But each scheme under the 1875 Act required the assent of Parliament. One of the main sources of weakness in the 1875 Act was the clauses dealing with compensation, and an amending Act to remedy this difficulty was passed in 1879. It was found that owners of slum property compelled to sell under an improvement scheme not infrequently benefited by their own wrong-doing, since the arbitrators assessed the value of the property on the basis of rental without reference to its insanitary condition. After the amendment, in the case of a house proved to have been a nuisance at the date of the official representation, the arbitrator settled first what the value of the house would be with the nuisance abated, and then proceeded to deduct the probable cost of abating the nuisance. But that provision, admirable as it was in many respects, was not wholly effectual. Another frequent cause of trouble in the 1875 Act was the requirement that dwellings had to be provided for the displaced population as far as possible within the same district. The 1879 Act contained provisions which enabled accommodation in certain circumstances to be furnished elsewhere, facilities which were increased four years later by the short Artisans Dwellings Act, 1882, passed at the instance of Mr. Joseph Chamberlain. A further improvement was made in this measure by excluding compensation for improvements executed after it had been officially announced that an area was to be cleared. Three years later the Housing of the Working Classes Act, 1885, was passed, the most important provision of which was the extension of the Torrens Act, which, it would be recalled, applied only to boroughs of over 25,000 inhabitants, to all urban districts. The result was that for the first time rural sanitary districts enjoyed the powers which had long been available, under the Labouring Classes Lodging Houses Acts, 1851-1867, for the larger town authorities. The first great attempt at consolidating housing legislation followed in the Housing of the Working Classes Act, 1890, which provided the model for the subsequent consolidating Acts of 1909 and 1925.

So far as the Housing and Town Planning Act, 1909 (introduced by Mr. John Burns), was concerned, said the lecturer, apart from its pioneer provisions with regard to Town Planning, its principal contribution to the housing problem was a more effectual procedure by which the owners of insanitary property could be compelled to make good defects or have their property closed and demolished. The two notable weaknesses of pre-War housing legislation were :—

(1) The tendency for compensation to be excessive by reason of its dependence on rents swollen by over-crowding; and

(2) the failure of local authorities outside large cities to act energetically in the absence of closer control from above. For example, in 1909 the total amount borrowed by local authorities with Government sanction for housing purposes amounted to the sum of only £49,000.

Approximately 95 per cent. of new houses prior to the Armistice had been built by private enterprise. But a number of factors were tending to diminish the willingness of persons to invest their savings in house property. Undoubtedly, the various Company Acts had opened avenues of moderately safe investment with a chance in prosperous times of much higher profits than could possibly accrue from the ownership of artisan houses. Rates and other public charges were tending to increase. Cost of labour and therefore of building was steadily rising. At the same time, particularly in the country, houses of a working-class type attached to themselves a customary standard of value, say 6s. per week; no wonder that in rural areas there was an estimated deficiency of 120,000 houses in 1912. In the urban areas this difficulty, though not so formidable, was coupled with a standard of sanitation and individual comfort increasing year by year. It was not surprising, therefore, to find that even before the War housing producing was showing a steady decline. In 1900 new dwellings were built to the number of 122,578; in 1905 no fewer than 129,842, and it might be noted that in no single year between 1900 and 1906 did the number of new houses fall below 100,000. Yet in 1910 the number was only 29,532, though this had increased to 67,577 in 1914.

The War, of course, effected almost complete stagnation in housing construction. Apart from the inevitable restrictions, prices of materials became prohibitive, and labour practically unobtainable, most of the skilled men being mobilised, and by the Armistice either killed or for the most part removed from their sphere of usefulness by disability. A comparison between 1911 and 1922 revealed the following—

	1911.	1922.
Number of separate families	8,065,290	8,739,197
Number of separate dwellings	7,753,000	8,030,000
Dwellings per 100 families	97.6	91.9
Empty dwellings ...	454,048	215,215

The Wheatley Act, in spite of its special conditions, appealed most strongly to the local authorities, for of more than 334,000 houses constructed under it, over 327,350 have been constructed by such authorities, only about 7,000 having been built by private enterprise and public utility societies.

After discussing the three post-War housing schemes, the Addison, Wheatley and Chamberlain Acts, the lecturer said that, according to the latest returns, the total number of houses built since the Armistice was 994,109 with State assistance and 666,346 without such aid, making a total of 1,660,455.

The interesting fact emerged from the figures for 1930-31 that 125,368 houses (out of 183,807) were erected by private enterprise. While the figures appeared reassuring when studied in conjunction with the official forecast of approximately 90,000 new houses per annum erected during the five years by local authorities and 125,000 by private enterprise, or over 200,000 per annum, it must not be forgotten that the population had probably increased since 1921 by 2,000,000, and that a wastage variously estimated, but probably not less than 45,000 houses per annum, had to be made good.

ARCHITECTURAL LIGHTING

The seventh and last lecture of the Faraday Illumination Design Course was given by Mr. W. Maitland, A.R.I.B.A., at the E.L.M.A. Lighting Service Bureau on November 23. In addition to the usual Design Course audience a number of architects were present. The lecturer said that the development of lighting during the past two years showed a definite elimination of point sources and a tendency towards the illumination of large interiors. This was made possible by the modern lamp, the absence of fire risk, remote control and comparative cheapness. Architects had, therefore, seized the opportunity of incorporating in their buildings light sources which had a definite relationship to their design. The engineer, as a result, had found himself faced with the task of setting aside lighting in terms of foot candles only, and was now obliged to consider quality of light at least as much as quantity. To-day he must be thoroughly conversant with the different diffusing and reflecting materials, and be able to inform the architect of the position of the light sources so that the desired ffeects required by the architect were fulfilled.

A considerable number of slides were shown illustrating the application of architectural lighting to cinemas, theatres, banks and public buildings. Professor A. E. Richardson, F.R.I.B.A., opened a discussion which followed the lecture.

INSTITUTION OF STRUCTURAL ENGINEERS

A PAPER on "The Employment of Structural Engineers as Specialists" was read before this Institution on November 26 by Mr. W. T. Creswell, Barrister-at-Law, Hon. A.R.I.B.A., etc.

It was under the London County Council General Powers Act, 1909, commenced the speaker, that statutory recognition was first given of the use of reinforced concrete as a building material, and of the use of iron and steel for skeleton construction in buildings. Under the London Building Act of 1894, all walls had to be of a specified thickness calculated in relation to their other two dimensions, viz., length and height. This was re-enacted in the London Building Act of 1930. But the Act of 1909 made it possible in the Metropolis to construct a building in which pillars and girders were designed to take the main weight of the upper floors, superimposed loads, roofs, panels of external walls, etc., the walls here being mere coverings or clothing of the skeleton structure, and at no time to be required to be more than 13 in. thick, whatever the height of the building. Those requirements of the Act of 1909 were repealed, but were re-enacted, and in general were now to be found in the third schedule to the London Building Act of 1930. That Act charged the district surveyors with the administration of matters connected with steel-framed structures, and they must be satisfied as to the calculated results, and also the methods whereby those results had been arrived at in specifying the dimensions of the members. Unfortunately, there were such wide discretionary powers given to those administering the London Building Acts that one did not know where one was when designing a building of large proportions. Further, in the light of present-day knowledge, and considering the improvements made in materials, the requirements of the Act were somewhat antiquated and generally in need of modernisation. It was true that the Act gave the right of appeal to the Tribunal of Appeal, to which body, when there were appeals relating to steel-framed structures and the like, was added one member appointed by the Institution of Civil Engineers. But appeals meant expense and often led to further expense, which, in these days, everyone wished to avoid.

There had now come about a need for the direct employment by the employer of structural engineers as "specialists" in the design of large buildings such as we saw growing up around us. Further, the structural engineer should be paid direct by the employer. That, of course, meant that the architect would be relieved of the responsibility for the safety of the walls, roofs and floors in buildings in which these were of steel structure, that responsibility being transferred to the structural engineer who had made the designs and calculations for the steelwork, etc. An architect commissioned to design and superintend the erection of an important building would find necessary the assistance of a structural engineer where a steel structure was involved. The architect would then clothe the carcase and give it its finishings, so producing the completed building. In short, the mathematical knowledge of the structural engineer would be required to co-operate with the artistic taste of the architect in order that the permanent safety of such buildings might be ensured. Under present conditions building contracts often provided that the employer should be free to nominate or select specialists or sub-contractors to execute any special work comprised within the general contractor's contract, such specialists often being named in the contract documents. But their nomination did not of itself create any direct privity of contract between the specialist and the employer, if, as was customary, the specialist's contract was made with the general contractor, nor could there arise out of those circumstances any well-founded suggestion that the general contractor was acting as the agent only of the employer, and the general contractor remained liable to pay the specialist for his work.

In the past architects, in order to avoid the need to employ expert structural engineering draughtsmen in their private offices, had relied on manufacturing firms to supply steelwork structures and special reinforcement for concrete, as sub-contractors for the work. Those manufacturers themselves employed structural engineering draughtsmen, who prepared for their use drawings, etc. No direct charge was made for their work, although it was calculated in their overhead costs. That obviously relieved the architect of that part of his duties, though, in fact, he must formally be "satisfied" with the work. If the architect, on the other hand, elected to prepare the drawings in his own office, normally he would forward them, with the other drawings, to the general contractor, who would doubtless sub-let the steel and special reinforcements, just as he let any other special work; and should the architect enter into direct relations with those or any other specialists or sub-contractors, he ran the risk of creating misunderstandings thereby, or of a well-founded statement that he had, as agent of the employer, made the latter liable for direct payment to those persons, the general contractor not having dealt directly with them.

An architect, in certifying for payment to the general contractor, often indicated in his certificate what proportion of the amount certified was due to the several specialists and sub-contractors if he had had direct contact with them: so that indirectly, though nevertheless truly, the employer thereby paid for the work of the engineering draughtsman who had in fact performed the part of the architect's duties. Further, if the drawings proved to be faulty, an action by the employer against the architect for negligence could be maintained. The architect could not shift the responsibility to the general contractor or sub-contractors, as their responsibility was technically to carry out the drawings previously approved by the architect. Such procedure did not as a rule come to the personal knowledge of the employer. Hence it seemed to be proved, by that means also, that it would be more satisfactory if the one who actually prepared the drawings and calculations for the steelwork was paid by the employer under a separate contract between them. It must be remembered that the architect had no implied authority to bind the employer by any arrangement he himself made with a sub-contractor: he only had such authority when it was definitely given to him by the contract: and even then such arrangements were made subject to the provisions of the general contract. Also the architect had no power to alter or vary any contract which had been entered into as between the general contractor and any sub-contractor: or to make any order to the latter direct even if he was prepared to make due allowance (for such variations) to the general contractor when adjusting the final account. And at all times, if the architect or the employer had direct dealings with any sub-contractor, the inference was always invited that the employer had thereby become liable to the latter.

As to remuneration, a professional man was only entitled to recover a reasonable remuneration for his services in the absence of a definite contract in respect to his fees, and it was certain that an architect's fees, if charged under the circumstances outlined above, would be in danger of considerable reduction if the fact were established that so large a proportion of his responsible work had been done for him as by this method. It therefore seemed preferable in every way that a professional structural engineer should always be employed when required, and that directly by the employer, to co-operate with the architect, and that he should be paid on commission in a similar manner to that in which the architect was paid. The Institution of Structural Engineers had a form of contract between the client and consulting engineer. He hoped it was widely used, said the speaker, for it was something the State would enforce, though forms of contract were not Acts of Parliament. Without a contract it was impossible to recover the remuneration justly expected. One could not sue on the basis of any known scale of fees, unless that scale entered into the conditions of the contract. One could, without that, only sue on a *quantum meruit*, and for a reasonable remuneration.

A claim for fees was often met by a counter-claim for "negligence"; and, as anyone ran the risk that he might at some time or other have to face such a charge, it was necessary, without being in any way litigious, that he should have the law in mind. Because "negligence" had been defined as "not doing that which a prudent man would do, *nor* doing that which a prudent man would not do, when under a duty to use care and thereby causing damage." What the structural engineer had to have in mind was the possibility of a charge of negligence in respect to his design. In a case recently decided by the House of Lords, it was held that an architect, who had specified a comparatively new material (some of which had not matured and had been used in the work), could be held liable for negligence, even though no final certificate had been given and the contractor had been called upon to make good defects, while the contractor was allowed to go free. Let it, however, be said at once that any professional man would be able to answer any charge of negligence if he could show that he had used such care and diligence and skill as was expected from other men in his profession and which his employer was entitled to look to him for.

Anyone familiar with the practice of modern building will concede that the complete structural engineer must be a man of many parts. At the present time he could not afford to neglect to make himself acquainted with what he might be inclined to regard as mere mundane matters bearing on his work and practice. To confine himself merely to designing was improvident. It was essential that his training should include some study of the principles of law as it related to his profession, and especially should he become familiar with the law relating to building contracts.

BUILDERS AT GOLF

A Building and Allied Trades Golfing Association has been recently formed, and the inaugural meeting took place on Wednesday, November 18, on the High and West Golf Courses of Moor Park, Rickmansworth. About forty well-known builders, builders' merchants, and architects took part in the competition, and had a very enjoyable day notwithstanding that rain to some extent interfered with the afternoon rounds.

The results of the competitions were as follows:—

Singles, on High Course.—1st, F. N. Andrews, 80 net; 2nd, Harvey A. Dawson and J. W. P. Rawlins, 81 net.—Tied.

Foursomes, on West Course.—1st, C. Buckley and R. G. Brightman, 78 net; 2nd, Clive Castle and J. W. P. Rawlins, 79½ net.

At the conclusion a meeting was held, and Mr. Geo. Ball, of Messrs. Geo. Ball Estates, Ltd. (Willesden), was elected captain for the coming year, and Mr. Hubert Hill, of Messrs. W. G. Hill and Son, was elected hon. secretary. The following gentlemen were elected on the committee:—Mr. T. Bannister, of Willesden; Major H. E. Dyke, of Messrs. John Knox and Dyke, Ltd.; Mr. Francis Jackson, of Francis Jackson, Ltd., Harrow Weald; with the captain and hon. sec. *ex officio* members.

It was decided in future to hold two meetings in the year—one in the spring and the other in the autumn. The hon. secretary, Mr. Hubert Hill, of Messrs. W. G. Hill and Son, Monument Station-buildings, 53-4, King William-street, E.C.4 (Royal 3714), will be pleased to give particulars to anyone wishing to join the society.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting!

We do not undertake to reply to inquiries concerning proprietary materials.—ED.

QUESTIONS.

Fire- and Sound-proof Pugging.

SIR,—I contemplate building an addition to a school and should be glad if you would give me your advice on the best fire- and sound-proof pugging for the first floor, which will be of wood. F. G.

Hoardings.

SIR,—I should be glad to be informed as to whether a local authority has powers to forbid the erection of a hoarding upon the public footway for the purpose of demolitions and rebuildings. Again, is it permissible for a member of the public to call attention of the local authority to a structure believed to be in a dangerous state, and is the local authority bound to take notice of such a request? BUILDER.

Chromium Plating.

SIR,—Can you inform me whether chromium plating is a lasting finish for outside work, and if so, on what metals it serves best? READER.

Garages.

SIR,—I have been told that fire insurance companies demand an extra premium for insuring private houses which include a motor garage under the main roof. I should be glad to know if this is correct. PREMIUM.

ANSWERS.

Old Tiles.

[ANSWERS TO "BOURNEMOUTH ARCHITECT," NOVEMBER 27.]

SIR,—The tiles sketched and described by "Bournemouth Architect" in your last issue are very similar to those illustrated by Mr. Nathaniel Lloyd in his "History of the English House," pages 253 and 281. Mr. Lloyd states that "These tiles (bedded in mortar) were nailed to wood studding or boarding. . . . Such tiling is almost indistinguishable from brickwork, and evaded the brick tax (1784-1850), but was in use earlier in the eighteenth century. It was employed also to encase timber and plaster walls of ancient buildings, for which, also, ordinary plain tiles and weather boarding were used." W. S. PURCHON.

SIR,—The rebated tiles your correspondent mentions are commonly found on old buildings in Guildford and other Surrey towns. They were used for vertical tile hanging, and fixed on battens, and in carrying out alterations to old buildings we have always found long and short tiles used alternately, so that on the face the appearance is very much that of bonded brickwork. They are used on buildings dating from about 1700. N. D. QUICK.

SIR,—I have heard of these being called "brick tiles" and "mathematical tiles." Their purpose was to cover wood-framed buildings, giving the appearance of brickwork, the building owner, probably having his own timber and, owing to cost or transport difficulties, preferring to use it and covering with these tiles. They were used in Kent and Sussex at least 200 years ago, and many examples may still be seen at Maidstone and Lewes. I recently saw an example at Basingstoke, but know of no general use in that neighbourhood. It is extremely difficult to detect the difference between these tiles, pointed as brickwork, and real old brickwork. They were hung on riven oak laths by means of oak pegs, specials being made for angles and stopends. O. A. AISHER.

Preparing Elm for Exhibition.

[ANSWER TO "P. A. W.," NOVEMBER 20.]

SIR,—"P. A. W." suggests twice sizing and varnishing, but this, I fear, owing to the damp nature of elm, would not be satisfactory. Last year I applied to a teak counter front and top some wax polish without any other preparation of any kind, and it was most satisfactory. Lay on a good coat and let it soak in for a day, then rub down with a cloth; apply a second coat, very little polish being needed, and again rub up. This will bring out the grain of the wood, and it can be handled without showing any fingermarks. A. S.

[A misprint occurred in the reply to this question in our last issue. For "umber" read "amber."]

Temporary Structure Question.

[ANSWERS TO "CHARTERED SURVEYOR," NOVEMBER 27.]

SIR,—Unless an urban district council takes action (I believe) within twelve months of erection, they cannot compel removal at a later period of a temporary structure. The present owner should decline to sign a "temporary structure" agreement, and wait action on the part of the authority. An urban district council of which the writer is a member adopted the method above named i.e., no action after twelve months' erection. There is a possibility of action being taken under the Public Health Acts—probably Section 27 of the 1907 Act. F.S.I.

SIR,—If the structure complies with the by-laws, as is stated, then it would appear that it cannot be regarded as a temporary structure. In general, the local authority cannot remove, alter or pull down the work where it has been completed more than twelve months even though no plans were submitted to, or approved by, the local authority. Whether or not it is a temporary building is a question of fact (see the local authority's own by-laws).

It follows that great care should be taken before entering into any agreement as suggested. Indeed, on the face of it none is required. Legal advice should be sought so as to avoid any drastic action being taken by the local authority. Reference might well be made to the case of Ruislip-Northwood Urban District Council *v.* Lee and Another (1931), 95 J.P. 164, which appears to be a case on all fours with the one in the question. LEX.

SIR,—The onus of giving notice of intention to build rests with the building owner, who is not absolved from responsibility by any failure on the part of the authority to challenge the irregularity. BY-LAWS.

Question of Contract.

[ANSWERS TO "NORTHANTS," NOVEMBER 27.]

SIR,—Assuming the quantities form part of the contract, the surveyor is in order in remeasuring, though it is difficult to understand why this should be necessary unless the job has been varied of intent. The contractor cannot charge for his own surveyor's services, since the latter are not really necessary, the quantity surveyor being an independent agent in the matter. SCHEDULE.

SIR,—Before a reply could be made it would be necessary to know the type of contract form adopted and clauses relative to the query involved. Apparently this is a case where the architect and/or clerk of works took out the original quantities. Probably errors of shortage have been discovered and the procedure being adopted is to ensure "Northants" getting the bare value of work executed and nothing more. Your querist should have a competent quantity surveyor to represent him in the remeasurement. F.S.I.

Schedule of Prices.

[ANSWERS TO "DUBIOUS," NOVEMBER 27.]

SIR,—"Dubious" appears to have missed the point. It is not a question of the builder losing money on an item, but of reducing by a percentage the amount of money specified as to be reserved for a certain purpose. If the builder were allowed to reduce the P.C. amounts by a percentage and no variation occurred in the contract, it would mean that the architect, by ordering goods to the value of the P.C. amounts he had directed to be reserved, would be incurring an extra of 6d. in the £ on the contract. This is obviously irregular. SCHEDULE.

SIR,—Surely it should appeal to reason that a prime cost sum introduced into a contract for a definite purpose cannot be reduced by any percentage of reduction a builder likes to apply to his total figure, that such a reduction should apply as a percentage of a total sum from the builder's own work. As an example, assume P.C. sums of £5,000 in a contract total of £10,000, off which the builder takes 5 per cent., representing £500, but which reduction, in effect, represents 10 per cent. on the builder's own work and should be so adjusted. If "Dubious" is assured of 2½ or 5 per cent. under the 1931 Contract Form, he should arrange his figures on the items to which such percentages do not apply in order to reduce his general profit. F.S.I.

Soundproofing Floor.

[ANSWER TO "J. S. R.," NOVEMBER 27.]

SIR,—Probably the cheapest method of deadening the sound would be to take up the boards and lay over the top of the joists a layer of insulating quilt of inexpensive type. The boards can then be relaid over this. Rubber flooring would involve a considerable expense, though offering a very comfortable job. INSULATE.

Covering for Stone Floors.

[ANSWER TO "READER," NOVEMBER 27.]

SIR,—If the stone floors are in slabs, it would probably pay to take these up, lay a thickness of breeze concrete, and lay tarred boards on same. The stone slabs should be of some value for garden paving. If your correspondent means a cement surface, this could be hacked and a composition floor laid on same. The standard catalogues give a number of variations of such floors, which are warm and comfortable and wear well if not too freely watered. SURFACE.

"Ceilings" in Specification Clause.

[ANSWER TO "COUNTRY," NOVEMBER 27.]

SIR,—It may be the specification calls for the ceiling board to be fixed to the joists with specified nails. If so this would identify the clause with joisted ceilings and the contractor could clearly claim an extra where he has been required to provide this covering to concrete ceilings. Otherwise the architect would appear to be right in his contention. SPEC.

Right of Light.

[ANSWERS TO "CROWN GLASS," NOVEMBER 27.]

SIR,—Your correspondent should adopt one of two courses:—

(*a*) If he does not object to being overlooked, he should arrange for his neighbour to pay him a nominal rent for the use of the window, with powers to terminate the agreement with due notice.

(*b*) If he objects to being overlooked he may erect a fence or hoarding on his own land immediately in front of the offending window.

In most districts there is a by-law requiring temporary wooden structures to be at least 10 ft. from the boundary. If this is the case in the present instance, it would appear that both parties have offended. BY-LAWS.

SIR,—Certainly, a right of light is being gradually acquired in respect to the narrow window overlooking "Crown Glass's" land. The neighbour will, however, have to show 20 years' uninterrupted user to acquire the absolute right to the light. In the meantime "Crown Glass" can erect and maintain a hoarding *on his own land* shutting out the light, that is all. He cannot call for its removal or the blocking up of it by his neighbour. LIGHT.

By-laws.

[ANSWER TO "COUNTRY PRACTICE," NOVEMBER 6.]

SIR,—Local authorities are not bound to specify the reasons for their disapproval of plans, neither is it legally compulsory on them to do so, but as a matter of courtesy. Surveyors, when intimating the disapproval of plans, generally state the cause. F.S.I.

THE BUILDING TRADE

ESTIMATING: SOME HINTS AND DATA—XXIII

By J. R. TAYLOR.

SUBSTRUCTURAL COSTS (continued).

The problem under consideration is the provision of foundations and other works up to ground-floor level for domestic buildings of all kinds, but particularly for council housing. It is a many-sided problem, but one that would, of course, present no difficulties to any architect, were it not that cost is so very important. A fairly level, naturally drained site with compact gravel near to surface presents no difficulty, though even on sites of this sort trouble has arisen out of a want of appreciation of the importance of a concrete mat properly placed. On large sites having clay subsoil, it is altogether a different matter, and there are so many cases in which much trouble has followed mistaken methods that even a more detailed examination of the subject than I propose to give to it would be justified.

The post-War period has brought with it such a widespread outbreak of dry rot (*Merulius Lacrymans*) that almost every housing authority throughout the country has been put to unforeseen expense in rectification or partial rectification of the damage done. One need only walk through any estate of considerable size and observe the relation of floor level to finished surface level, and to road levels, noting at the same time the size and type of air grates used (many of which will probably be missed because covered up with shrub and creeper), to be able to forecast with certainty that we are not nearly at the end of our troubles. In the majority of cases reported, the outbreak is attributed to the falling off in the quality of the timber imported since the War, and particularly during the years immediately succeeding it. It is said to have been of inferior quality, cut at the wrong time of year, and unseasoned, all of which is quite true, but is an evasion of the principal facts. *Merulius Lacrymans* will attack thoroughly sound timber under encouraging conditions, and the presence of moisture in the early stages of its growth is one of the most essential of these. That is why, though outbreaks have been known to originate in upper floors, roofs, cupboards, and other places, quite ninety-nine out of every hundred start in the ground floor or below ground floor. It is, therefore, of primary importance that when a ground floor is to consist of joists and boards, the space below must be dry and remain dry.

The food of *Merulius Lacrymans* is timber, and by treatment, particularly by treatment under pressure, timber can be rendered so unpalatable as to be all but immune from attack. But the circumstances under which building operations are carried out make it dangerous to place implicit reliance on treatment. It is almost inevitable that untreated timber, even though in very small quantity, will, either by accident or other cause, find its way into or below floor. Assume that a treated joist or wall plate is cut to fit. Would any practical man like to take the responsibility on a large scheme of guaranteeing that every end so cut is treated with a brush before being placed in position? Then consider the floor-boards. These, if treated at all, are usually brush-coated on the underside only, though in exceptional cases they are also coated after laying. Here, again, the cut end and the ripped-up board will escape the most vigilant supervision that it is practicable to give, and there are still the skirtings, their grounds, solders or plugs, the architraves, casing ends, and what-not to be considered. Treatment is all very well and much to be recommended, but a dry sub-floor space is of greater importance.

Thus, if we have no choice in regard to the construction of the floor itself, we have to provide it with a dry sub-floor when joists and boards are used, and at the same time carry the foundations deep enough or in other way ensure stability. Unfortunately, a clay site doubles the difficulty, because by ordinary methods we can only secure stability at considerable depths, and the water seeking entry will in wet weather be present in greater volume. If, therefore, we place the mat at or below finished surface level, the walls surrounding it and the mat itself must be definitely impervious to moisture, or the access for surface water must be definitely denied. The simplest, easiest, and probably most effective way out is to place the mat well above surface level, and so related to the dampproof course that surface water cannot reach it. In these days of electric light it would be wiser to sacrifice a further 6 in. or so out of the height of living rooms than to push down the sub-floor, but the pros and cons of this need not at present be considered.

Stability.

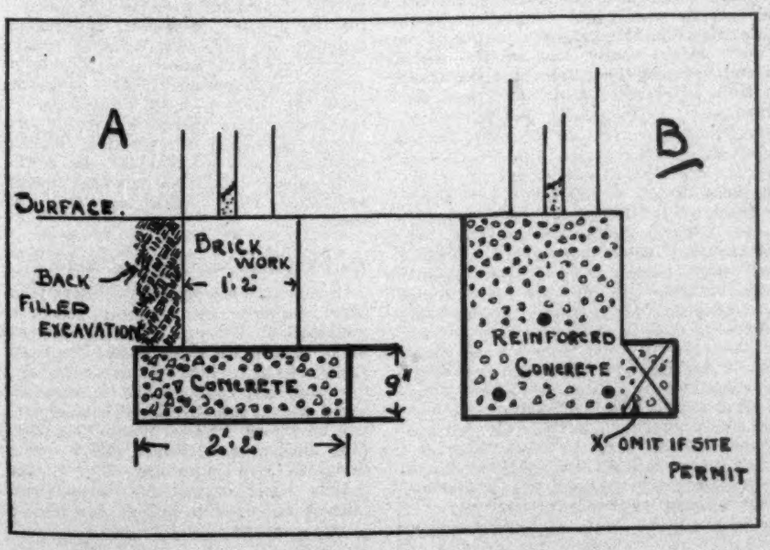
With regard to buildings, stability has other than one meaning, and that which we are now dealing with presupposes that practically all buildings settle down a little during the building operations and for a short time afterwards. What is needful is that the movement should be so even as not to cause any damage, and that it should shortly cease and the building come to rest. Complete rest can only be attained when the nature of the subsoil is such that it will undergo no subsequent changes below foundation level. Sand, for instance, when compressed by the weight of the building, is quite safe if it cannot escape from under, nor be rendered capable of further compression, by reason of an unforeseen withdrawal of water. Clay may serve at a rather less depth than 4 ft, if the water is first of all drained out of it before building begins, and it is then so protected that fresh water supplies cannot reach it. This complete protection is not, however, easily obtained, and I refer to it now more because sketch B suggests that, with trenches filled with concrete, there is less danger from exposure to heavy rainfall during building than is the case of sketch A. It is practically impossible to get as much earth back into a trench as is dug from it in the first instance, except by repeated rammings at rather long intervals. And where the space is so narrow as that between the brick face and trench side this difficulty is so much increased that some water will almost certainly penetrate to the foundation.

Sketch B shows a method that has other advantages in that it goes a long way to ensuring that any settlement that takes place shall be even and regular, and that any break in the bearing capacity of the soil would be bridged. It offers one, if not two other advantages, which may be dealt with at some other time. Meanwhile, we may usefully consider the relative costs of a stretch of foundation as sketch A, when compared with sketch B. A convenient length to take is 300 ft., which about represents the quantity that would be required for a group of four parlour-type houses. Prices vary in different districts, but we shall have easy figures if we strike an average and value concrete at 1s. per ft. cube in foundations, excavation at 3s. per yd. cube, and brickwork below ground at £27 4s. per rod, which gives us 2s. per ft. super of 14 in. work.

Using these figures, the cost of foundation at 2 ft. deep for four houses would be, when as sketch A, £69 1s. 10d.; at 3 ft. deep, £102 14s.; at 4 ft. deep, £139 6s. 2d. This means that on a clay soil, if we go down to 4 ft. in search of security, it would cost us a further £17 10s. per house over the cost at 2 ft.

If now we turn to sketch B and use the same prices as the basis of the estimate, and take the three five-eighths mild steel reinforcing bars to be worth £18 per ton, the comparable cost of foundations at 2 ft. deep is but a little over 6s. per house more than brickwork at the same depth, the four houses costing £70 6s. 10d., as against the £69 1s. 10d. given above. Provided a paved path were continued round each block, so that there were no flower borders close to the walls, a foundation of this sort with 1 to 6 concrete would be reasonably safe.

(To be continued.)



A Film on Oxy-Acetylene Welding.

A meeting of the Institution of Welding Engineers will be held at the Institution of Mechanical Engineers, Storey's-gate, S.W.1 (by kind permission of the Council of that Institution) on Thursday, December 10, at 7.45 p.m., when a film on oxy-acetylene welding will be shown (by arrangement with the Acetylene and Welding Consulting Bureau, Ltd.), followed by an informal discussion on the examination of welders, to be opened by Mr. P. L. Roberts. Free admission to the meeting can be obtained by ticket from the Acting Secretary, the Institution of Welding Engineers, 30, Red Lion-square, W.C.1.

ONE-PIPE SYSTEM OF HOUSE DRAINAGE

In view of the controversy at present going on in this country on the "One-pipe system of house drainage," the following extracts from a paper read by Mr. S. F. Arthur Long at the Carpenters' Hall recently, on "Sanitary Plumbing as Applied to Hospitals," are of interest. The lecturer said that until quite recently most local authority by-laws required that whenever practicable all soil and waste pipes should be situated outside buildings. This was often a sore point with architects as, owing to the large amount of piping entailed in providing ventilation and anti-syphonage pipes, in addition to soil and waste pipes, they found the windows of their buildings more or less framed with pipes, and the appearance of their buildings irretrievably spoiled. In December, 1930, however, the Ministry of Health issued Model By-laws for New Streets and Buildings, Section 64 of which provides that "Every such ventilating pipe, soil pipe, or waste pipe shall be not enclosed by any part of the building except:—

(i.) where it passes through any cornice or similar external architectural feature:

(ii.) where it is formed
either of heavy cast-iron socketed pipes with airtight joints and suitably protected inside and outside against corrosion,
or of lead,
or of some other not less suitable material, and, if formed of lead or any other material similarly susceptible of external injury,
either is exposed throughout so much of its length as is enclosed by any part of the building except where it passes through a floor or ceiling,
or is adequately protected by enclosure in a chase with a metal front;

(iii.) where a ventilating pipe is carried immediately beneath the covering of the roof."

So they would observe that in the districts of the local authorities who adopt this Section 64 of the by-laws it would be possible for soil and ventilating pipes and waste pipes to be fixed inside buildings under certain conditions, and one could readily perceive that in all important buildings it would soon become the practice to keep some of the pipes, at any rate, on the internal face of the external walls, and it would be a feasible scheme to run the main soil, ventilating and waste pipes on the external wall faces, and for the branch ventilation and anti-syphonage pipes to be fixed on, or in, the internal wall faces.

Before leaving this Section 64 of the new Model By-laws there was one paragraph which he would draw attention to, and that was paragraph No. 5, which read as follows:—

"(5) The waste pipe from every bath, sink (not being a slop sink intended for receiving any solid or liquid filth), or lavatory, and every pipe for carrying off foul water, shall

(*a*) discharge so as not to cause dampness in any part of any wall or foundation of any building, and where it discharges to a pipe or drain other than a soil pipe from a water closet be disconnected from the pipe or drain by a trapped gully with a proper grating above the level of the water in the trap;

(*b*) if it is more than six feet in length, be provided with a proper trap;

(*c*) if it discharges into the soil pipe from a water closet, be provided whatever its length with a proper trap adequately secured against syphonic action.

(6) The overflow pipe from any cistern shall discharge in the open air and, where possible in a conspicuous position."

So it would be observed that if, and where, this by-law was adopted it would be permissible to connect all that might be termed comparatively clean water wastes from baths, sinks and lavatory basins direct to soil pipes, provided these wastes were adequately trapped and secured against syphonic action. This was the American principle of sanitary plumbing, and, in his judgment, it was to be regretted that this model by-law had been put forward, as it contained many elements of risk.

Hitherto it had been the practice in this country to disconnect all such wastes from soil pipes or drains by causing them to discharge into the open air over gullies. Under these conditions no great harm could arise in the event of the waste of a bath, sink, or lavatory basin becoming temporarily defective, or of a trap losing its water seal by evaporation because of an apartment being temporarily vacated, as the air passing out of the defect or unsealed trap would be just atmospheric air more or less fouled by passing through the dirty waste pipe. But the position would be entirely altered if the waste were directly connected with the soil pipe, as in that case the defective waste or unsealed trap would be giving off dangerous drain air into the building.

One could readily understand that on the completion of a new, well-constructed job under the American system, everything might be in order, all the waste pipes with their joints being perfectly sound and airtight, and the traps under the fittings properly sealed, but, in course of time, as a result of age and decay and the constant expansion and contraction to which all pipes were subject, defects were bound to arise, and it would come to this, that although we might have simplified our sanitary plumbing somewhat, yet, on the other hand, we should have caused so many more pipes to be in direct connection with the drains to give off dangerous sewer gases into our buildings when defects arose.

There were other points in connection with this Clause 5, Section 64, of the 1930 Model By-laws, of which he felt certain they would not approve. Take paragraph (*b*), for instance. By this paragraph, if the waste-pipe from any bath, sink, or lavatory was less than 6 ft. in length, it need not be provided with a trap if the waste was disconnected from the drain by a trapped gully. Why such an untrapped waste-pipe should be sanitary if it was less than 6 ft. in length and insanitary if it was, say, 6 ft. 6 in. in length, he failed to understand. Surely it was better that all waste-pipes should be trapped, and, if needs be, ventilated, whatever their length. One could perceive that a nuisance, if not a danger, might arise from an untrapped waste-pipe less than 6 ft. in length. Take, for example, the waste from a scullery sink through which greens water had been discharged. The stench from the greens water lying in the gully might easily pass up the waste pipe and pervade the whole building for a long time after the water had been discharged.

Dissecting this Clause 5 a little more closely, we found, firstly, that although under its provisions paragraph (*c*), it became permissible to discharge the waste-pipe from every bath, sink, and lavatory into the soil-pipe from a water-closet, provided the said waste was provided with a proper trap adequately secured against syphonic action, yet, on the other hand, under paragraph (*a*) it was not permissible to discharge such a waste-pipe into a drain other than the soil-pipe from a water-closet unless it be disconnected from the drain by a trapped gully. It came to this, therefore, that under this clause we were permitted to discharge a bath, sink, or lavatory situated on, say, the first floor of a building into a soil-pipe provided the waste-pipe was properly trapped and adequately secured against syphonic action, yet the waste of a similar bath, sink, or lavatory situated on the ground or lower floor of a building, although it might be trapped and ventilated in itself, could not be discharged into a drain without being disconnected by a trapped gully. On the face of it, this seemed absurd, as what was a soil-pipe but a drain under another name?

He hoped that the time might never come when local authorities would decide to include this clause in its present form in their by-laws. They would naturally ask what he meant by that qualification "in its present form," and his answer was that he saw no reason whatever why the comparatively clean water from a bath, sink or lavatory should not be allowed to discharge into a cast-iron soil pipe, provided the waste was properly trapped and adequately secured against syphonic action in itself, and provided, further, that the waste pipes were then collected together into another trap to disconnect them from the soil pipe. This trap also, would have to be adequately secured against syphonic action, and, moreover, it would have to be fixed inside the building to secure it against frost, fitted with an airtight but easily opened cover, and ventilated, if needs be, by a special pipe carried from the underside of the cover and above the water seal of the trap to the open air. Such a special ventilating pipe would not always be necessary, as the wastes from the various fittings would be ventilated in themselves. Here, then, we should have a trap which would disconnect the various wastes from the soil pipe, as they were now disconnected from the drains by a gully in present-day practice. The second trap or gully would provide a second line of defence against the certainly obnoxious and probably dangerous gases which were to be found in soil pipes and drains, and in the event of a waste pipe becoming defective from any cause or the water seal of a bath, sink, or lavatory being lost by evaporation, one could be satisfied that it would not be the obnoxious and dangerous gases arising from fœcal matter or urine that would be entering the building.

NATIONAL HOUSING AND TOWN PLANNING COUNCIL.

A conference of this Council, in association with the Scottish National Housing and Town Planning Committee, was held at Blackpool from Friday, November 27, to Monday, November 30, when various papers of housing and town planning interest were read. In a "Memorandum on the Present Housing Situation in England and Wales," Mr. John G. Martin, secretary to the Council, after pointing out the statutory duty to prepare housing schemes, said the Executive Committee of the National Housing and Town Planning Council fully recognised the paramount need for national and local economy at this critical juncture. They could not, however, agree that it would be real economy or wise statesmanship to discontinue the vitally important work of providing homes for the people. Moreover, any general curtailment of municipal housing programmes would inevitably cause a further serious increase in unemployment, both in the building trade and also in allied industries. Local authorities were therefore strongly urged to review constantly the housing conditions in their areas and to make full use of the very wide powers and the increased measure of assistance which Parliament had given to them.

An Insulating and Building Board.

Details have reached us of "Ensonit," a wood fibre insulating and building board, said to constitute an advance in tensile, fire-resisting, sound and thermal insulating capacity. It appears to us to have merits for interior lining for walls and ceilings, and is especially prepared with a smooth glazed surface, in standard brown or white. Wood Products, Ltd., King William-street House, E.C.4, who market this, are also importers of "Ensonal," a thinner board of much the same properties, suitable for window display and similar temporary purposes.

NEW BUILDINGS IN LONDON

Addington. — HOUSE. — Messrs. George Baines & Son, FF.R.I.B.A., A.I.Struct.E., 121, Victoria-street, Westminster, S.W.1, are the architects for a house at Pine Coombe for Mrs. Hoekman. The house is to be erected by Messrs. E. H. Smith (Croydon), Ltd., 48, Wellesley-road, Croydon, at a cost of £3,931 13s.

Balham.—EXTENSIONS.—Extensions are to be erected to the Weir Hospital. Plans have been prepared by Mr. J. S. Thompson, 49, Wimbledon Hill-road, S.W.19.

Bermondsey.—HOUSING.—The B.C. has received M.H. permission to build further 24 flats at Rotherhithe-street, and 19 flats at Vauban-street.

Bermondsey.—ALTERATIONS.—Messrs. F. J. Eedle and Meyers, Railway Approach, London Bridge, S.E.1, are the architects for alterations to the "White Hart" public-house, St. Thomas-street. The work is for Messrs. Truman, Hanbury and Buxton, Ltd., Brick-lane, E.1, and the builders are Messrs. Truett and Steel, Ltd., 3-4, Palace-chambers, Bridge-street, S.W.1.

Bermondsey.—ALTERATIONS.—Plans have been approved by the B.C. for alterations to the "Earl of Derby" public-house, 185, Grange-road. The plans have been submitted by Mr. F. S. Newnham, Messrs. Barclay, Perkins and Co., Ltd., Park-street, S.E.1.

Bermondsey. — RECONSTRUCTION. — The Works Committee has submitted to the B.C. a revised estimate at £36,346, for the reconstruction of Neckinger depot. Messrs. Gleeds, 106, Regent-street, W.1, are the quantity surveyors.

Camberwell.—FACTORY.—The Amalgamated Dairies, Ltd., 26, Tooley-street, S.E.1, have acquired a site in Farmers-road, S.E., for new factory premises, etc. The preparation of plans is in the hands of Messrs. Wills and Kaula, 22, Southampton-street, W.C.1.

Chelsea.—REBUILDING.—Mr. G. Alan Fortescue, F.R.I.B.A., 32, Beauchamp-place, S.W.3, is the architect for the rebuilding of 16, Godfrey-street, Chelsea.

Covent Garden.—OFFICES.—We understand that Messrs. Epps & Ponder, F./ A.R.I.B.A., of 616, Bank Chambers, 329, High Holborn, W.C.1, have been appointed architects for the new sales rooms and offices for Messrs. Geo. Monro, Ltd., in Wellington-street, W.C.2.

Crawford-street.—SHOPS.—A block of shops and flats are to be built in Crawford-street and Seymour-place, W.1. Plans are by Messrs. J. Stanley Beard and Clare, F.R.I.B.A., 101, Baker-street, W.1. The contract is in the hands of Messrs. F. W. Falkner and Sons, Ltd., 24, Ossory-road, S.E.1.

Crystal Palace.—HOUSES.—Five houses are to be built on the Border-crescent estate to plans by Mr. G. Alan Fortescue, F.R.I.B.A., 32, Beauchamp-place, S.W.3.

Crystal Palace.—FLATS.—Mr. G. Alan Fortescue, F.R.I.B.A., architect, 32, Beauchamp-place, S.W.3, has prepared plans for a block of flats at Crystal Palace Park-road, Crystal Palace.

Dagenham. — HALL. — A site has been acquired in Reede-road for a new amusements hall for Mr. H. Newcombe, 6, Reede-road, Dagenham. Plans are by Mr. E. Meredith, F.R.I.B.A., 7, Goodmayes-road, Goodmayes.

Ealing.—BUILDINGS.—Plans have been prepared by Mr. A. S. Hopkins, 70, Thorney Hedge-road, Gunnersbury-avenue, W.4, for one house and 24 flats at the rear of Edmonscale, Argyle-road, W.

Eltham.—MARKET.—Mr. E. Unwin, of 32, Old Queen-street, S.W.1, has submitted plans to B.C. to lay-out of estate on south side of Eltham-road, including covered market building.

Eltham.—EXTENSIONS.—Mr. J. L. Simpson, Union House, St. Martin's-le-Grand, E.C.1, has submitted to the B.C. plans on behalf of Messrs. Lever Bros., Ltd., for extension to sports pavilion in Sparrows-lane.

Golders Green.—OFFICES.—Plans have been prepared for a block of offices with flats on the upper floors at the corner of Golders Green-road and Gloucester-gardens, N.W. The builders are Messrs. Bennett and James, Golders Green-road, N.W.11.

Golders Green.—HOUSES.—A site in Finchley-road, N.W., has been acquired for the erection of high-class residences. The builders and owners are Messrs. Hilbery Chaplin, Ltd., 4, Russell-parade, N.W.11.

Great Cumberland-place.—FLATS.—Messrs. H. Sabey and Co., Ltd., 7, South Wharf, W.2, are demolishing premises in Great Cumberland-place, W.1, for the erection of a block of flats. The architect is Mr. W. E. Masters, F.R.I.B.A., 28, Upper Gloucester-place, N.W.1. The building work is to be put out to tender.

Hackney.—FACTORY.—A new two-floor factory is being erected at the rear of 51, King Edward's-road, E.9, by Messrs. E. B. Holmes and Co., Ltd., 157, Mare-street, Hackney, E.8. Mr. H. W. Currey, F.R.I.B.A., F.S.I., 51a, Catherine-street, Buckingham Gate, S.W.1, is the architect.

Hendon.—EXTENSIONS.—Plans have been prepared by Messrs. Bethell and Swannell, 16, John-street, W.C.2, for extensions to the premises of Messrs. Eugène, Ltd., in Edgware-road, N.W.9.

Hendon.—FLATS.—A block of 28 mansion flats is shortly to be commenced on a site in Vivian-avenue, N.W. The plans have been prepared by Mr. A. J. Butcher, A.R.I.B.A., 2, Express-mansions, Edgware.

Hounslow.—FLATS.—Plans have been prepared for six flats in Spring Grove-road. Mr. S. G. Higgins, 47, Upper Berkeley-street, W.1, is the builder. The architects are Messrs. Pipe and Hunt, 87, George-street, Portman-square, W.1.

Hounslow.—HOUSES.—Plans have been prepared for the development of the Barrack Field estate by the erection of about 150 houses. The builder is Mr. F. Warren, Great West-road, Hounslow.

Kingston-on-Thames. — OFFICES. — Messrs. W. H. Gaze and Sons, Ltd., of 19, High-street, Kingston-on-Thames, are the builders for a block of offices, and Mr. Stanley P. Anderson, F.R.I.B.A., Creek House, High-street, Kingston, is the architect.

Norwood.—ALTERATIONS. — For alterations to the branch post offices, H.M.O.W. have placed a contract with Messrs. E. Orpin & Son, 92, Anerley-road, Upper Norwood.

Poplar.—BATHS.—Tenders are being invited by the B.C. for new baths on the site of the Poplar Baths now being demolished. Mr. Harley Heckford is the Borough Engineer and has prepared the plans.

Poplar.—HOUSING.—The Housing Committee of the B.C. has recommended, subject to approval, the scheme for the erection of 48 flats, two cottages, and 20 shops at Judkin-street and Roffey-street, East Ferry-road, to be proceeded with in accordance with plans prepared by the Borough Surveyor, at £36,710.

Princelet-street, E.1. — REBUILDING. — Premises at Nos. 6-10 are to be rebuilt for Messrs. Jackson and Joseph. The architect is Mr. W. C. Inman, 24, Old-buildings, W.C.2, and the contractors are Messrs. Woodward and Co. (Finsbury), Ltd., 13, Wilson-street, E.C.2.

Richmond.—REBUILDING.—Plans for the rebuilding of the "Bricklayers' Arms" have been prepared by Messrs. F. J. Fisher and Sons, 35, John-street, W.C.1, for Messrs. Watney, Combe, Reid and Co., Ltd., Stag Brewery, Westminster, S.W.1.

Southgate.—The District Council has approved plans for 39 mansion flats to be erected on the Grove House estate.

Southwark.—SUB-STATION.—A large sub-station and control room is to be erected in connection with the South-East England electricity scheme, on a site at Bankside, acquired by the Central Electricity Board, 1, Charing Cross, S.W.

Stratford.—REBUILDING.—Premises at 382 and 384, High-street, E.15, are to be rebuilt as new branch bank for the Midland Bank, Ltd., Poultry, E.C.2. Plans have been prepared by Messrs. Whinney, Son and Austen Hall, 37, Norfolk-street, W.C.2.

Twickenham.—HOUSING.—With reference to the Forty-acre Field development the Borough Engineer has submitted to the T.C. for consideration sketch plans for nine types of flats and houses for the development of the site, together with estimated cost of the buildings.

Twickenham.—SERVICE STATION. — Plans have been prepared for a petrol-filling station, offices, stores, etc., on the corner of Whitton-road and the proposed New Chertsey-road, for Messrs. Willment Bros., contractors, Baltic Wharf, Waterloo Bridge, S.E.1.

Twickenham.—CONVERSION.—Plans have been prepared for the conversion of Monteagle House, Riverdale-road, into flats, with a garage adjoining. The architect is Mr. A. Gordon Alexander, A.R.I.B.A., 11, Old Queen-street, Westminster, S.W.1.

Wimbledon.—HOUSING.—The T.C. are to consider a proposal for the erection of houses on land fronting Gap-road.

Wimbledon. — HOUSES. — Mr. G. Alan Fortescue, F.R.I.B.A., 32, Beauchamp-place, S.W.3, is the architect for three houses on the Cottenham Park-road estate, S.W.

Wood Green. — FLATS. — The U.D.C. are proposing to build flats on the station site, fronting Brownlow-road. The surveyor is to prepare plans for the scheme.

Woolwich.—HOUSES.—The B.C. are proposing to proceed with 400 houses on the Middle Park estate.

NEW CINEMAS

Camberley.—Mr. M. B. Lawson, F.I.A.A., Lloyds Bank Chambers, High-street, Camberley, Surrey, is architect for the erection of a new cinema theatre on a site in Frimley-road, Camberley.

Forest Hill.—The Stanstead Cinema has been taken over by Mr. Ben Jay, 3, Alexandra-villas, N.4, and, it is understood, will be decorated and refurnished entirely.

Glasgow.—Plans have been prepared for a new picture house at Calder-street, Govan Hill (for the Calder Street Picture House, Ltd., 35, Bath-street, Glasgow), by the Contractors' Architectural Staff of Messrs. Cowieson's, Ltd., contractors, Charles-street, St. Rollox, Glasgow.

Liverpool.—The T.C. is recommended that, subject to the consent of the Minister of Health, the piece of land situate on the south side of Prescot-road and the west side of Somerford-road, Dovecot Estate, be sold to Mr. C. J. Doyle, of 15, Victoria-street, Liverpool, for the erection of a cinema thereon.

Morden.—Plans for the erection of a new cinema at Morden, Surrey, for Messrs. I. Osloff and L. Rolnick are being prepared by Mr. George Coles, F.R.I.B.A., 35, Craven-street, Strand, W.C.2. The scheme includes the erection of four shops on the flanks of the building and an arcade of 32 small shops at the rear.

Nottingham.—Mr. S. W. Gibbons, Elm Bank, Mapperley-road, Nottingham, is connected with a scheme to erect a cinema to hold 3,000, on a site in Angel-row. A car park, probably on three floors, is planned in connection with the scheme.

Penarth.—It is learnt that the Western Sound Cinemas, Ltd., the Canton Coliseum, Cowbridge-road, Cardiff, are to build a new cinema at Penarth, near Cardiff. The scheme provides for a cinema with seating accommodation for about 1,500, with a café and dance floor, and will cost about £30,000 to build.

Preston.—A cinema to seat 1,000 is proposed to be erected on a site at Blackpool Arterial-road and Ribbleston-avenue. It is learnt that Mr. George Moorcroft is connected with the scheme.

Preston.—Mr. S. Eteson, of Preston, is said to be connected with a plan to build a 890-capacity cinema in New Hall-lane.

Saltburn.—The engineers to the L.N.E.R. Co. will investigate a scheme to pull down a considerable portion of the railway station and to erect a cinema and floral hall on the site.

Southport.—It is learnt that Messrs. Wm. Tomkinson & Sons, 3, Great Newton-street, Liverpool, have secured the contract for the building of a new theatre on the site of the Southport Opera House. The value of the contract, it is stated, is £70,000.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1931.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Accrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aldershot	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Alfreton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Alnwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Altrincham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ashford (Kent)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ashington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashton-under-Lyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Aylsham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barnstaple	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barrow-in-Furness	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Barry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bedford	1/5	1/5	1/5	1/5	1/5½	1/5	1/5	1/0½
Berwick	1/5½	1/5½	1/5½	1/5	1/5½	1/5	1/5½	1/1½
Bexhill	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Birkenhead	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Birmingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bishop Auckland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackburn	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Blackpool	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bognor Regis	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bolton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bournemouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bradford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bradford-on-Avon	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Braintree	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0
Brentwood	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Brighton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bristol	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromsgrove	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromyard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bungay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Burnley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Burton-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury St. Edmunds	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Buxton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cardiff	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Carlisle	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chatham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chesterfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Chorley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cirencester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Clacton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Colchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Coventry	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cranbrook	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cromer	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Darlington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Deal	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Denbigh	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Derby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Devizes	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Dewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Doncaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dorchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Dorking	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Droitwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2
Dudley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Durham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/0½
Eastbourne	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
E.Glam.(Mon.Val.)	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ely	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Exeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Exmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Fakenham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Felixstowe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Frome	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Glossop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gloucester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Godalming	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Goole	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gosport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grantham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gt. Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Grimsby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Guildford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Halifax	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harpenden	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Harrogate	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hartlepools	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hereford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Herne Bay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	10½
Holt	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Huddersfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hull	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hunstanton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huntingdon	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Isle of Wight	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Ipswich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Keighley	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Kettering	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kidderminster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kings Lynn	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Lancaster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leamington Sp	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leicester	1/6½	1/6½	1/3	1/3	1/3	1/3	1/3	1/2
Leighton Buzzard	1/3	1/3	1/5½	1/5½	1/5½	1/5½	1/5½	11½
Lichfield	1/5½	1/5½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/6½	1/6½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Littlehampton	1/3½	1/3½	1/8	1/9	1/8	1/8	1/8	1/3½
Liverpool	1/8	1/8	1/5	1/5	1/5	1/5	1/5	1/0½
Llandudno	1/5	1/5	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Llanelly	1/6½	1/6½						
London—								
12 m. radius	1/8	1/8	1/8	*	1/8	1/8	1/7	1/3
12-15 m. radius	1/7½	1/7½	1/7½	*	1/7½	1/7½	1/6½	1/2½
Loughborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lowestoft	1/4	1/4	1/4	1/6½	1/4	1/4	1/4	1/0
Luton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Macclesfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Malvern	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Manchester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Mansfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Margate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Market Harborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Matlock	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Melton Constable	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Melton Mowbray	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Merthyr Tydfil	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Middlesbrough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newark	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newcastle-on-Tyne	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newcastle-u-Lyme	1/6	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
New Forest	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newport, Mon.	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Northampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Norwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2
Nottingham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nuneaton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oakham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Oldham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Paignton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Peterborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/2
Plymouth	1/0½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/1½
Pontypridd	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/0½
Portsmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/2
Preston	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ramsgate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/0½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Redditch	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Reigate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Retford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/2
Ripon	1/5	1/5	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochdale	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rugby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Saffron Walden	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sevenoaks	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sheffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sittingbourne	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
South Shields	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stevenage	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stockport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stockton-on-Tees	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stoke-on-Trent	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourbridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stowmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Stratford-on-Avon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stroud	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sunderland	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swaffham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Swansea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Swindon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Tamworth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Thetford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Torquay	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Trowbridge	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Uttoxeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsall	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Walsden	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warminster	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Warrington	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Warwick	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wells (Norfolk)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Welwyn Gar. City	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
West Bromwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Weston-sup-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Whitby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wigan	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Winchester	1/4	1/4	1/4	1/5	1/4	1/4	1/4	1/0
Windsor	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wisbech	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wolverhampton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Woodbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Worksop	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worthing	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wrexham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wycombe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wymondham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st February, 1931, is 1/10½ per hour.

For Building Trade wages in Scotland, see page 938.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

DECEMBER 7.

Amersham.—Houses.—38 at Mill-lane, for R.D.C. Kemp & How, architects, 4, Bloomsbury-sq., London, W.C.1. Dep. £2.

Cleethorpes.—Shed.—Open cart shed at Poplar-rd. depot, for U.D.C. L. W. Pye, E. and S.

Darton.—Houses.—34 non-parlour at Staincross and 26 non-parlour at Higham, for U.D.C. J. H. Hinchliff, architect, Hill Top, Clapton West, near Huddersfield.

Isle of Ely.—Garage.—In grounds of County Hall, March, for E.C. School Architect, County Hall, March.

London.—Repairs.—Cleaning, painting and minor repairs, etc., at Grove Park Hospital, Lee, S.E.12; King George V. Sanatorium, Godalming, Surrey; and Pinewood, Wokingham, Berks, for L.C.C. Chief Engineer, Old County Hall, Spring-gdns., S.W.1. Dep. £1 each.

Manchester.—Alterations.—At Hyde-road car depot to form ticket department, for T.C. City Architect. Dep. £1 1s.

Nottingham.—Fencing.—Unclimbable iron fencing and gates and other appurtenant work, in parishes of Selston, Normanton-on-the-Wolds, and Stanton-on-the-Wolds, Notts, for T.C. F. W. Davies, Engineer and General Manager, Water Department, Castle Boulevard. Dep. £2 2s.

Penygroes.—Extensions.—Alterations and extension to existing hall, for Memorial Hall Committee. D. G. Owen, Manager, Midland Bank, Penygroes, S.O.

Slough.—Wall.—Dwarf wall and brick and concrete piers, including wrought-iron gates and railings, for U.D.C. A. Bromly, E.

Sunbury-on-Thames.—Painting.—External, 19 houses in Nursery-rd., and 47 houses, Sutherland-av., for U.D.C. H. F. Coales, S.

DECEMBER 8.

Barnes.—Cottages.—Pair of semi-detached cottages at site of girls' central school, Lonsdale-rd., for U.D.C. E. and S.

Barton-upon-Irwell.—Houses.—Six at Flixton, for R.D.C. C. Faulkner, clerk. Dep. £2.

Dorchester.—Houses.—12 at Charminster, and 2 at Tolpuddle, for R.D.C. F. T. Maltby, L.R.I.B.A., chartered architect, Dorchester.

Frome.—School.—New senior school, for Managers of the St. John's Church of England Schools. A. J. Pictor, architect, Abbey-chams., Bath. Dep. £2 2s.

Glasgow.—Houses.—904 houses and hostel, Carntyne South housing scheme, for Corporation. D. Stenhouse, T.C.

Limerick.—School.—At Parteen. J. Moloney, Parteen.

Pembury.—Nurses' Home.—At the Tonbridge Poor Law Institution, for the Kent C.C. The Architect, Sessions House, Maidstone. Dep. £2 2s.

Peterborough.—Sub-station.—Electricity sub-station in St. Paul's-rd., for T.C. W. H. A. Court, City E. and S. Dep. £1 1s.

Ranmoor (Sheffield).—Telephone Exchange, for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Shrewsbury.—Houses.—8 at Gwyn-close, Crowmere-rd., for T.C. A. W. Ward, B.S. Dep. £1 1s.

DECEMBER 9.

Belfast.—Shed.—Also collateral works on west side of Turning Basin, Co. Antrim, for Harbour Commissioners. T. S. Gilbert, consulting engineer, Harbour Office.

Chipping Norton.—Enlargement.—Of casual ward block at Poor Law Institution, for Oxfordshire C.C. G. T. Bennett, C.S., 8, New-rd., Oxford. Dep. £1 1s.

Edinburgh.—House.—Transformer house at Milton-rd., for T.C. E. J. MacRae, A.R.I.B.A., City Architect

Glasgow.—Ironmongery.—At Garscadden school, Carlibar-av., Knightswood, for T.C. D. Stenhouse, T.C. Dep. £1 1s.

Leeds.—Post Office Garage. For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

Norfolk.—Alterations.—To Downham Market Poor Law Institution, for C.C. C. J. Norton, A.R.I.B.A., Stracey-rd., Norwich. Dep. £1 1s.

Nottingham.—Demolition.—Of Arboretum South branch recovery school, Waverley-st., for E.C. A. H. Whipple Director of Education, South Parade. Dep. £1.

Rochdale.—Conveniences.—At Castleton, for T.C. B.S.

Southport.—Demolition.—Taking down and removing from old market-st., (Eastbank-st., Southport, the whole of the walls and temporary buildings, for C.B. A. E. Jackson, B.E.

Windsor.—Repairs.—Maintenance repairs to the fabric of St. George's Chapel and other Collegiate buildings in charge of the Dean and Canons of Windsor. B. B. Robertson, Chapter Surveyor, St. George's Chapel, Windsor Castle.

DECEMBER 10.

Stamford Hill, N.—Telephone Exchange, for H.M.O.W., Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

DECEMBER 11.

Edinburgh.—Houses.—48 three-apartment houses, comprising the ninth development of Niddrie Mains housing scheme, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Kingston-upon-Hull.—School.—Elementary school, Endike estate, Hull, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 15s.

DECEMBER 12

Ardgour.—Hall.—Ardgour Memorial Hall. G. Macritchie, architect, Fort William.

Cleckheaton.—Reconstruction.—Of conveniences at Oakenshaw Council school, for Spenborough U.D.C. A. Rothera, S., Church-st., Cleckheaton.

Ecclesfield.—Additions.—Also alterations to police station, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

***Edmonton, N.9.**—Plastering.—134 houses, Montagu-rd., housing scheme, for U.D.C. Clerk, Town Hall. Dep. £2 2s.

Holmfirth.—Roof.—New roof and painting and decorating at Town Hall, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

Doncaster.—Painting.—Painting and decorating at West Riding police station and petty sessions room, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

DECEMBER 14.

Basford.—Conversion.—Closet conversion scheme at Ruddington, for R.D.C. Stephen Maylan, E. and S. Dep. £2 2s.

Basford.—Conversion.—Closet conversions at Greasley, for R.D.C. S. Maylan, E. and S. Dep. £2 2s.

Ilkeston.—Houses.—Pair of houses in Chapel-st., and construction of footpaths, drainage, and fencing, for T.C. B.E.

Kiveton Park.—Conversions.—Improving sewage disposal works and for converting into water closets 190 pail and privy closets in parish of Anston, for R.D.C. S.

***Norwich.**—Houses.—At Mile Cross Estate, for the Corporation. Chairman, Housing Committee. Guildhall. Dep. £5.

Preston.—Accommodation.—Washing accommodation and latrines at grammar school playing-fields, Fishwick Bottoms, for C.B. B.E. and S., Birley-st. Dept. £1.

Slough.—Houses.—80, for the U.D.C. A. Bromley, S. Council Offices, William Street.

Winchester.—Demolition.—Pulling down of three cottages, Nos. 2, 3 and 4, The Weirs, for T.C. City E.

DECEMBER 15.

Edinburgh.—Buildings.—Demolition of buildings, reconstruction of existing buildings, and erection of new buildings to form new primary school and new technical department at George Heriot's school, Lauriston-place, for George Heriot's Trust. Reid & Forbes, architects, 17, Great Stuart-st., Edinburgh.

Launceston.—Alterations and additions to Post Office, for H.M.O.W. Contracts Branch, King Charles Street, London, S.W.1. Dep. £1 1s.

Tottenham.—Fences.—Underdrainage and construction of entrances and boundary fences at Lordship recreation ground, for U.D.C. Capt. H. F. Wilkinson, E. Dep. £2.

DECEMBER 16.

Attleborough.—Painting.—General external painting and sundry other works at institution, for Norfolk C.C. C. J. Norton, A.R.I.B.A., architect, Stracey-rd., Norwich.

Birmingham.—Lighting.—Electric lighting and power supply at proposed new police station, Steelhouse-lane, for T.C. H. H. Humphries, City E. and S. Dep. £5.

Dundee.—Foundations.—Reinforced concrete foundations for coal and ash handling plant, generating station, Carolina Port, for T.C. D. H. Bishop, General Manager and Engineer, Electricity Supply Department, Dudhope Crescent-rd., Dundee.

London, N.—Employment Exchange.—Erection of, at Holloway, for H.M.O.W. Contracts Branch, King Charles Street, London, S.W.1. Dep. £1 1s.

DECEMBER 17.

London.—Baths.—In ferro-concrete, brickwork and steel, public baths in East India Dock-rd., for Poplar B.C. Harley Heckford, B. E. and S. Dep £5 5s.

DECEMBER 18.

***Barrow-in-Furness.**—Public Hall.—Rebuilding of, in Cornwallis-st., for the Corporation. Town Clerk, Town Hall.

***Cardiff and Newton Abbott.**—Site works, etc., for the Central Electricity Board. Secretary, Trafalgar-buildings, 1, Charing Cross, London, S.W.1. Dep. £2 2s.

DECEMBER 19.

***Reading.**—Houses.—On the Whitley housing estate. Town Clerk, Town Hall. Dep. £2 2s.

DECEMBER 22.

***Exeter.**—Extension.—And alterations. For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s

***Hounslow.**—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s

***Richmond, Yorks.**—Post Office.—Erection of, for H.M.O.W. Contracts Branch, King Charles-st.,

***Tidworth.**—Police Station. Clerk, The Castle, Winchester. Dep. £1 1s.

DECEMBER 31.

Bishops Stortford.—Alterations.—And additions at Haymeads Institution, for the Herts C.C. Clerk, Public Assistance Office, Hertford. Dep. £5 5s.

JANUARY 1.

Bradford.—Demolition.—Of "Victoria Inn," for T.C. N. L. Fleming, T.C.

JANUARY 2.

Halifax.—Garage.—Omnibus garage, Elm Wood, for C.B. A. C. Tippie, B.E., Crossley-st. Dep. £2 2s.

JANUARY 5.

Birmingham.—Building.—Medical superintendent's office, visitors' waiting-room, lavatory accommodation, etc., at West Heath Sanatorium; new mortuary, pathological and post mortem block at Selly Oak Hospital; provision of heating installation, hot and cold water, steam, gas and fire hydrant services, for T.C. F. H. C. Wiltshire, T.C. Dep. £2 2s. each.

MARCH 1.

Uruguay.—Slaughterhouse.—Large slaughterhouse and plant, for Frigorifico Nacional. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10927.)

NO DATE.

Aylesbury.—Repairs.—Also decorations to "Silverdale," for R.D.C. Taylor & White, architects, 7, Bourbon-st. Dep. £1 1s.

Dundee.—Reflooring.—In Western school, Broughty Ferry, for Corporation. Official Quantity Surveyor, 91, Commercial-st.

Southampton.—Demolitions.—Demolishing 19 cottages at Romsey, and removing materials, for Romsey By-pass, for C.C. W. J. Taylor, C.S., Winchester. Dep. £1 1s.

MATERIALS, etc.

DECEMBER 7.

Dublin.—Paints, etc.—For Commission Irish Lighthouse Service. J. B. Phelps, secretary.

Halifax.—Painting, Materials, etc.—For C.B. P. Saunders, T.C.

Halifax.—Plumber's Materials, etc.—For C.B. P. Saunders, T.C.

Lancaster.—Builder's Materials.—For Corporation. T. Hill, B.S.

Norwich.—Building materials, etc.—For T.C. J. S. Bullough, City E.

DECEMBER 8.

Dundee.—Paints, etc.—For Harbour Trustees. J. H. Thompson, general manager, Harbour-chambs.

DECEMBER 10.

Darlington.—Lead Pipe.—For Durham County Water Board. W. R. Ward, clerk, 77, North-gate.

DECEMBER 11.

Aberdeen.—Builder's Materials.—For police department of T.C. T. F. Henderson, City Engineer and Water Engineer.

DECEMBER 12.

Doncaster.—Furniture.—For Police Station and Court House. Clerk, County Hall, Wakefield.

East Suffolk.—Road Materials.—For C.C. W. Jervis, C.S., Ipswich.

DECEMBER 14

Nottingham.—Plumbers' Materials.—For T.C. W. J. Board, T.C.

DECEMBER 16.

Breconshire.—Road Materials.—For C.C. J. M. Richards, C.S., Watton, Brecon.

Huntingdonshire.—Road Materials.—For C.C. H. Leete, C.S., Huntingdon.

DECEMBER 19.

Isle of Wight.—Road Materials.—For C.C. A. J. A. Harris, County Highway Surveyor, County Hall, Newport, I.W.

Montgomery.—Broken granite, etc.—For C.C. Wm. Owen Jones, C.S., Welshpool.

DECEMBER 21.

Hereford.—Highway Materials.—For T.C. City E.

Sleaford.—Road Materials, etc.—For U.D.C. S. F. Clare, S.

DECEMBER 22.

London.—Highway Materials.—For Lambeth B.C. O. Caitlin, B.E.

DECEMBER 23.

Angora.—Bricks, etc.—Refractory bricks and mortar, for Ministry of National Defence. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. B.X. 7182.)

JANUARY 1.

Glasgow.—Lime.—For T.C. D. Stenhouse, T.C.

JANUARY 15.

London.—Bricks, etc.—For Islington B.C. Chief Electrical Engineer, Electricity Works, 60, Edengrove, Holloway, N.7.

NO DATE.

Leeds.—Sand.—For Corporation Waterworks Department. Harry Shortreed, Manager, 26, Gt. George-st.

ENGINEERING, IRON AND STEEL.

DECEMBER 7.

Axbridge.—Mains.—Laying 3,500 yds. of 2 in. cast-iron main and 350 yds. of 1 in. wrought-iron pipe, with the work auxiliary thereto, at Wedmore, for R.D.C. Parker Pearson & Ross Hooper, engineers, Dallas-chambers, Chippenham. Dep. £2 2s.

Belper.—Sewerage.—Sewers and sewage disposal works, for U.D.C. Charles J. Lomax & Son, chartered civil engineers, 37, Cross-st., Manchester. Dep. £5 5s.

Clutton.—Sewerage.—Sewerage and sewage disposal works at Timsbury, for R.D.C. Thomas & Morgan, engineers, 23, Gelliwastad-rd., Pontypridd. Dep. £5.

Epsom.—Sewerage.—Pumping station, provision, laying and jointing of a 9 in. cast-iron pumping main of about 1,080 yds. in length, including crossing River Mole and other appurtenant works at Fetcham, for R.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

Epsom.—Drainage.—18 in., 15 in., 12 in., 9 in., and 7 in. sewers for total length of about 10,000 yds., together with manholes, flushing tanks, and ventilating shafts, also for construction of settlement tank, filter, humus tank, pipe lines and other appurtenant works at Chessington, for R.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Dep. £5.

Sittingbourne and Milton.—Sewerage.—Cast-iron and stoneware pipe sewers, including manholes, syphons, ventilating columns, and other works incidental thereto, for U.D.C. A. P. I. Cotterell & Son, engineers, 54, Victoria-st., Westminster, S.W.1. Dep. £5 5s.

Thakeham.—Extension.—To water supply at Storrington, for R.D.C. H. B. Nichols, 13, Victoria-st., S.W.1. Dep. £5.

DECEMBER 8.

Calstock.—Water Supply.—To parish of Calstock, for R.D.C. Lemon & Blizard, consulting engineers, 24, Lockyer-st., Plymouth. Dep. £3 3s.

DECEMBER 9.

Belfast.—Shed.—Shed and collateral works on west side of turning basin, Co. Antrim, for Harbour Commissioners. T. S. Gilbert, consulting engineer, Harbour Office.

Bingham.—Manholes.—Laying of approximately 260 yds. lin. of 9-in. sewer with manholes, etc., at Works-lane, Barnstone, for R.D.C. C. W. Kendrick, S. Dep. £1.

Cardiff.—Bridge.—Over Glamorganshire Canal, consisting of steel arch ribs, mass concrete abutments, and wing walls, and stone parapets, together with contingent works, including deepening of a portion of canal and building mass concrete quay wall on North Orbital-rd., Western section, for T.C. City E. Dep. £2 2s.

Ystradgynlais.—Improvements.—To water supply, for R.D.C. Gerald Swayne, E., 1, Victoria-st., S.W.1. Dep. £2 2s.

DECEMBER 10.

Langport.—Water Supply.—At Aller Huish and Muchelney, for R.D.C. W. Herbert Bateman, E., Batheaston, Bath. Dep. £5 5s.

Maidlethorpe and Sutton.—Sewers.—Sewers and sewage disposal works, for U.D.C. Silcock & Simpson, consulting engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £5.

DECEMBER 11.

Chichester.—Mains.—Supply and laying of approximately 12 miles of cast-iron and steel water mains in parishes of Appledram, Birdham, West Wittering, East Wittering and West Itchenor, together with necessary bends, etc., for T.C. Frank J. Lobley, City E., Grey Friars, North-st. Dep. £5.

Helmsley.—Sewage.—606 yds. 6-in., 445 yds. 7-in. and 225 yds. 9-in. salt glazed ware sewers, and 45 yds. of 6-in. cast-iron pipe, together with manholes; also sewage purification works, in parish of Oswaldkirk, for R.D.C. Silcock & Simpson, engineers, 10, Park-row, Leeds. Dep. £2.

Newton-in-Makerfield.—Sewerage.—Sewerage and sewage disposal works, for U.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £4 4s.

Shardlow.—Extensions.—Sewerage and sewage disposal works at Chaddesden, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

Shardlow.—Sewerage.—Sewerage and sewage disposal works at Melbourne, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

DECEMBER 12.

Warblington and Westbourne.—Sewerage.—Laying about 17,000 lin. yds. of 6-in., 9-in. and 12-in. sanitary and cast-iron pipe sewers, with necessary manholes and flushing chambers; sewer crossings under railways, and other incidental works, for Joint Drainage Committee. Taylor & Wallin, engineers, 1, Saville-pl., Newcastle-on-Tyne. Dep. £10.

DECEMBER 14.

Belfast.—Improvements.—Harbour improvement works at Ballycastle, County Antrim, for Government of Northern Ireland. Ministry of Finance, 13, Ormeau-av., Belfast (Room 20). Dep. £10.

Malpas (Cheshire).—Sewer.—Laying 2,218 yds. of 6-in. and 9-in. sewer with manholes, etc.; works of sewage disposal; construction of tanks, filters of 464 cubic yds. capacity, and other appurtenant works, for R.D.C. A. G. Eccleston, clerk. Dep. £2 2s.

Middlesex.—Sewers.—Main sewers of brickwork, concrete and cast-iron segments, total length 4 miles along valley of Brent, for C.C. Dodd & Watson, engineers, Wellington-house, Bennett's-hill, Birmingham.

Todmorden.—Reservoir.—Reinforced concrete service reservoir at Cross Hills, for Heptonstall water supply, for R.D.C. H. C. Ritchie & Partners, Royal Liver-buildings, Liverpool.

DECEMBER 15.

Donaghadee.—Waterworks.—Reservoir and other waterworks, for U.D.C. Sir Alex. Binnie, Son & Deacon, engineers, Artillery House, Artillery-row, Westminster, S.W.1. Dep. £10.

Horsham.—Sewerage.—7¼ miles of concrete pipe sewers of varying dia. from 9 in. to 36 in., together with manholes, chambers, stream and railway crossing, and other appurtenant works, for U.D.C. C. G. Atkinson, E. Dep. £5 5s.

Marlow.—Drainage.—Laying of house drains to approximately 125 houses and conversion of privies, pail closets and insanitary water closets into modern water closets, for U.D.C. H. C. Paine, 52, High-st.

New Zealand.—Towers.—270 galvanised steel transmission line towers, complete with arms, ground stubs and accessories, for Public Works Dept. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. G.X. 10703).

Warwickshire.—Widening.—Monkspath bridge carrying Birmingham-Stratford county road, A.42, over River Blythe, 2½ miles south of Shirley, for C.C. D. H. Brown, C.S., 8, Northgate-st., Warwick. Dep. £2.

DECEMBER 16.

Dundee.—Foundations.—For coal and ash handling plant at generating station, Carolina Port, for T.C. D. H. Bishop, General Manager and Engineer, Electricity Supply Department, Dudhope Crescent-rd.

Eastleigh and Bishopstoke.—Sewage.—For U.D.C. A. P. I. Cotterell & Son, engineers, 54, Victoria-st., Westminster, S.W.1. Dep. £1.

London.—Bridge.—Steel and concrete bridge at entrance to Deptford Playing Fields, Deptford Bridge, S.E., for Deptford B.C. B.E. and S. Dep. £1 1s.

Swansea.—Shafts.—Subaqueous tunnels and shafts, dock intake and discharge and foundations for power station at Tir John North, for C.B. Sir Cyril Kirkpatrick, consulting engineer, 25, Victoria-st., Westminster, S.W.1. Dep. £10 10s.

DECEMBER 17.

Cannock.—Sewage.—Laying of cast-iron sewers and construction of sewage disposal works, at Heath Hayes, for U.D.C. R. Blanchard, E. and S. Dep. £2.

Ilkeston.—Reservoir.—Reinforced concrete reservoir, for T.C. Herbert Lapworth, E., 25, Victoria-st., Westminster, S.W.1. Dep. £5.

Mansfield Woodhouse.—Sewerage.—Sewerage and stewage disposal works, for U.D.C. Elliott & Brown, engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

DECEMBER 18.

Castleford.—Sewerage.—Pumping station, pump well, detritus tank and storm tanks at Council's present pumping station site at Ings-lane; construction of percolating filter, dosing tank and humus tanks, various alterations to existing works and removal and replacement of filtering medium in existing percolating filters at Council's sewage treatment works in Wheldale-lane; alteration of several existing manholes, and construction of a new storm overflow in town, together with various subsidiary works, for U.D.C. L. Birch, E., Town Hall. Dep. £3 3s.

Desborough.—Sewers.—Laying of about 2,500 yds. of stoneware pipe sewers from 9-in. to 18-in. dia., and construction of tanks, filters, sludge lagoons, and other works, in the parish of Desborough, for U.D.C. Pick, Everard, Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Dep. £2 2s.

Redditch.—Sewerage.—Five miles of stoneware sewers of 6 in., 9 in. and 12 in. dia., and of sewage purification works, comprising grit chambers, sedimentation and stormwater tanks, filters, etc., for U.D.C. Lieut.-Col. A. J. Dickinson, E. Dep. £3 3s.

Shardlow.—Sewerage.—In Littleover and district, for R.D.C. Elliott & Brown, chartered civil engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

DECEMBER 21.

Cannock.—Sewer.—3,130 lin. yds. of sewers varying from 21 to 39 in. in dia., manholes, together with screening chambers, detritus tanks, sedimentation tanks, dosing chambers, bacteria beds, humus tanks, storm water tanks, sludge lagoons, engine houses, pump wells, and incidental works, for U.D.C. Robert Blanchard, E. and S. Dep. £5 5s.

Chatham.—Sewerage.—Construction of low level pumping station, together with all appurtenant works, in dockyard, for T.C. W. H. Radford & Son, engineers, Albion-chambs., King-st., Nottingham. Dep. £3 3s.

Johannesburg.—Bridgework.—Bridgework superstructure for the Umbilo-rd. bridge, Durban, for South African Railways and Harbours Administration. Dep. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. G.X. 10921.)

Oxford.—Waterworks.—Extensive waterworks installation and 2 lengths of pipeline, at Swinford, for T.C. Sir Alex. Binnie, Son & Deacon, Artillery House, Artillery-row, Victoria-st., Westminster, S.W.1. Dep. £10.

Rochford.—Sewerage.—At Great Wakering, for R.D.C. W. E. Blizard, E., 9, Victoria-st., Westminster. Dep. £5 5s.

DECEMBER 23.

Saffron Walden.—Extensions.—To waterworks, for T.C. A. H. Forbes, E. Dep. £2 2s.

Stockholm.—Bridge.—Construction of Stockholm Western bridge, for Stockholm Harbour Board. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 10897.)

DECEMBER 31.

Ormskirk.—Sewerage.—Sewerage work for sewage disposal works at Lathom and Burscough, for U.D.C. H. B. Ward, consulting engineer, 26, North John-st., Liverpool. Dep. £3 3s.

ROAD, SEWERAGE, AND WATER WORKS.

DECEMBER 7.

Esher and the Dittons.—Laying of cast-iron pipe and concrete tube sewers at Thames Ditton, for U.D.C. E. and S. Dep. £3 3s.

★**Farnborough, Hants.**—Carriageways, etc., for the New Cemetery, for the U.D.C. John A. Kingdon, Clerk. Dep. £1 1s.

Knaresborough.—Drainage.—Main sewer approximately 1,743 1-3 lin. yds. in length, tunnelling and manholes in connection with drainage of "Scotton Banks," for R.D.C. A. E. W. Lupton, E., 14, Bower-rd., Harrogate. Dep. £2.

Manchester.—Paving.—Various roads, for T.C. F. E. Warbreck Howell, T.C.

St. Albans.—Sewers.—Stoneware and concrete pipe sewers, each approximately 1¼ miles in length, for T.C. City E. Dep. £2 2s.

South Shields.—Making-up.—Streets on housing estate at Boldon Colliery, for R.D.C. W. Welsh, surveyor and architect, Council Offices, East Boldon.

Swinton and Pendlebury.—Sewer.—600 yds. of 27-in. and 21-in. diameter concrete tube sewer, together with manholes, etc., for U.D.C. H. Entwisle, E. and S.

DECEMBER 8.

Axminster.—Water Supply.—Water supply works at Uplyme, for R.D.C. W. Herbert Bateman, E., Batheaston, Bath. Dep. £2 2s.

Bolton.—Sewers.—Reconstruction of Tonge and Bradshaw Brook intercepting sewers, consisting of approximately 7 miles of sewer varying in dia. from 12 in. to 54 in., together with necessary connections from subsidiary sewers, storm-water intercepting chambers, manholes, etc., for C.B. S. Parker, T.C.

Southgate.—Making-up.—6 various roads, for U.D.C. R. Phillips, S. Dep. £2.

Yiewsley and West Drayton.—Making-up.—Ferrers-av. and Bagley-close, West Drayton, for U.D.C. W. T. Morgan, S. Dep. £2 2s.

DECEMBER 9.

Birmingham.—Sewerage.—3,460 yds. of brick and concrete stoneware pipe and concrete tube sewers, and about 2,200 yds. of stoneware pipe drains in Walsall-rd., Tower-hill, Queslett-rd., and in private lands, Perry Barr, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Heston and Isleworth.—Making-up.—Of Bassett-gdns., for U.D.C. J. G. Carey, E. and S. Dep. £2 2s.

Heston and Isleworth.—Making-up.—Of Lampton-av. (part of), for U.D.C. J. G. Carey, S. Dep. £2 2s.

DECEMBER 12.

Aberdare and Mountain Ash.—Sewer.—Provision and laying of 4,250 yds. cast-iron pipe sewers, for U.D.Cs. Thomas & Morgan & Partners, civil engineers, Pontypridd. Dep. £10.

DECEMBER 14.

London.—Making-up.—Also widening of Bedford-walk, between Phillimore-gdns. and Campden Hill-rd., for Kensington B.C. B.E. and S.

Tipton.—Sewers.—Roads and sewers and levelling of housing site on Queen's-rd. housing scheme, for U.D.C. H. N. Woodard, E. and S. Dep. £2 2s.

DECEMBER 15.

Tottenham.—Reconstruction.—(1) Lordship-lane, from the Wood Green boundary to Lordsmead-rd., and Bruce-grove; (2) West Green-rd., from Green-lanes to Philip-lane, in two coat asphalt (clinker aggregate) on reinforced concrete foundations, for U.D.C. Capt. H. F. Wilkinson, E. Dep. £2 each road.

DECEMBER 16.

Breconshire.—Dressing.—Surface dressing work, for C.C. J. M. Richards, C.S., Brecon. Dep. £2 2s.

DECEMBER 17.

Richmond (Surrey).—Roads.—Carriageways for housing scheme within borough, for T.C. B.E. Dep. £1 1s.

DECEMBER 18.

Rayleigh.—Sewerage.—3¼ miles of stoneware pipe sewers, with manholes, and works incidental thereto, for U.D.C. W. E. Blizard, E., 9, Victoria-st., Westminster. Dep. £3 3s.

DECEMBER 19.

Portslade and Southwick.—Pipes.—Brick storage sewer, the laying of certain 12 in., 15 in. and 24 in. concrete pipes, including manholes, and various appurtenant works, for Outfall Sewerage Board. Geo. W. Warr, E., Town Hall, Southwick. Dep. £2 2s.

DECEMBER 21.

Chester.—Sewerage.—Concrete pipe sewers at Lache, for T.C. C. Greenwood, City E. Dep. £2 2s.

Waltham Holy Cross.—Sewerage.—980 yds. lin. of 12 in. stoneware pipe sewers, 1,700 yds. lin. of 9 in. stoneware pipe sewers, and 235 yards lin. of 6 in. stoneware pipe sewers in High Beech, for U.D.C. W. C. Holloway, E. and S.

DECEMBER 22.

Twickenham.—Reconstruction.—Staines-rd. reconstruction—first cross rd. to fifth cross rd., for T.C. Gilbert R. King, B.E. and S. Dep. £2 2s.

Public Appointments

DECEMBER 7.

Huddersfield.—Clerk of Works. H. E. G. Hall, Secretary, Huddersfield Royal Infirmary

DECEMBER 9.

***Wood Green.**—Clerk of Works (Temporary) required by the U.D.C. Clerk, Town Hall, N.22.

DECEMBER 18.

***Castleford, Yorks.**—Resident Engineer required by the U.D.C. Clerk, Town Hall.

"SELLING BRITISH"

The Minister for Overseas Trade, Major John Colville, M.P., in a reception accorded to the Press on Tuesday, gave some facts of interest concerning the British Industries Fair, which opens in February next at Birmingham, and the White City and Olympia, London. The Minister prefaced his subsequent remarks by saying that we should make a great effort not only to "Buy British," but to "Sell British," "Talk British," and in every way possible foster a national spirit, for, in his opinion, as a manufacturing nation we were far from done. British industry was built on the rock of good value. He would press the realisation, also, of the fact that the present depreciated rate of exchange, while of considerable assistance for the moment, must not be reckoned a permanent asset, as steps could be, and were being at that moment, taken by foreign Powers to counter-balance the advantage.

Turning to the subject of the Fair, it was already certain that it would exceed 600,000 square feet of exhibiting area. There were over 2,000 exhibitors, and it was satisfactory to know that the only space left was an area of less than 250 square feet. He would draw special attention to the representative exhibit of textiles at the White City, the furniture section at Olympia, and the new quarrying section at Birmingham. It was already certain that there would be many more overseas buyers this year than the 4,608 of last Fair. Special arrangements were being made for extending hospitality to them. Great Britain, in the past, had been left a little behind in extending hospitality to visitors; in his, the Minister's opinion, it was a most important side of the business, and he intended to try his utmost to see that that matter was amended without delay. After stating that a serious and growing interest in the British Industries Fair was indicated in all parts of the world, particularly in Holland and the Scandinavian countries in Europe, and in Canada and the United States, the Minister concluded by making an appeal in the first place to retailers in this country to give a close and sympathetic examination to the goods displayed at the forthcoming Fair, so that they might be in a position to stock the British-made article for which the public would wish to ask. Equally he asked the British manufacturer, and particularly the exhibitor at the Fair, to leave no stone unturned to discover British sources of supply for his raw materials and semi-manufactured parts.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Abbey Town.—S. Mann, A.R.I.B.A., 26, Lowther-st., Carlisle, prepared plans for reconstruction of village hall. Tenders invited.

Aberdeen.—Palais de Danse (Aberdeen), Ltd., obtained lease of old railway repair sheds at Kittybrewster, and proposes to convert building into hall on lines of Waverley Market, Edinburgh.

Adlington.—Vicar, Rev. W. R. Coombe, and members of Parish Church propose tower in completion of the church as war memorial. Plans by R. Martin, L.R.I.B.A., diocesan surveyor, 90, Deansgate, Manchester.

Alwoodley.—Plans prepared for parochial hall. Tenders invited. Architects, Kirk & Tomlinson, Albion-st., Leeds.

Barking Town.—T.C. approved: alterations to "Stag" beer-house, Ripple-rd.

Barnet.—R.D.C. received letter from M.H. asking for plans and details of ejector station, plant, etc., in connection with drainage scheme for north end of Shenley.

Bath.—Whitehead & Mason, Ltd., proposing alterations to 29, Milsom-st.

Batley.—F. Woolworth & Co., Ltd., acquired site with frontage to Commercial-st.

Billingham-on-Tees.—Tenders invited by U.D.C. for subway under railway near Sweethills. J. H. Hills, S.

Bingley (Yorks).—Governors of Bingley and Shipley secondary schools approved school at Nab Wood for girls.

Birmingham.—Rev. G. B. Chatwin, 53, Willow-av., Edgbaston, propose Church of St. Gregory the Great, at Three Shires Oak-rd., Bearwood.—Mitchells & Butlers, Ltd., Cape Hill Brewery, Smethwick, propose rebuilding "Golden Cross" hotel at Bromsgrove. Plans by Watson & Johnson, F.R.I.B.A., architects, Winchester House, Victoria-sq.

Blackpool.—Beardshaw & Co., builders, 19, Queen-st., to erect 16 houses off St. Annes-rd.

Boston.—R.D.C. approved addition to canning factory in Drainside, Skirbeck, J. & J. Beaulah, Ltd.

Broomhill.—Northumberland County E.C. to provide school to replace existing building. W. W. Tasker, F.R.I.B.A., 17, Claremount-rd., Newcastle-on-Tyne, is County Architect.

Cannock.—Major A. H. S. Waters, 25, Temple-row, Birmingham, engineer for town's main sewerage scheme, which is to cost £60,000.

Carlake.—Lanarkshire C.C. to carry out improvements and additions at Higher Grade school. J. Stewart, architect, Education Offices, Motherwell.

Carlton.—U.D.C. applied to M.H. for permission to build 100 houses.

Carnbrae.—Lanarkshire C.C. have housing scheme for Carnbrae area. Architect, P. Smith, Clydesdale-st., Hamilton.

Carver.—Local branch of British Legion propose village hall.

Castleford.—West Riding C.C. preparing plans for nursery school, Wheldon-rd. district. County Architect, Wakefield.

Coventry.—General Works Committee of T.C. recommend straightening river near Charterhouse Mill be proceeded with.—Public Health Committee recommend clearance of areas by demolition of all buildings; and application be made for sanction to £28,269 for 100 houses at Stoke Aldermoor re-housing site.

Cramlington.—U.D.C. to acquire land at New Town for 160 houses.

Darlington.—Bondgate Wesleyan Circuit acquired "Elm Ridge" house for conversion into church premises.

Devizes.—R.D.C approved:—6 houses by F. C. Stroffon.

Dewsbury.—Workshop for Blind Institution of Dewsbury and Batley district at Soothill. Tenders invited for extensions to Technical College at £19,000 and other schools at £2,100.

Douglas.—Lanarkshire C.C. have scheme under improvement trust for Douglas and are negotiating about a site. Architect, P. Smith, Clydesdale-st., Hamilton.

Dublin.—Plans passed: Belton-park, Donnycarney, 12 houses, Councillor P. Belton; Iona-rd. and Gartan-av., 4 houses, J. J. Hart; St. Andrew's, S.C.-rd., Rialto, addition, Methodist Church Trustees; Great Western-sq., 15 garages, Mrs. Kavanagh; Beaumont-rd., Drumcondra, 10 houses, Saorstat Civil Service Public Utility Society; Merrion-rd., 6 houses, F. Thompson.

Dun-Laoghaire.—B.C. propose 56 houses for artisans at Kell-av. Tenders invited.

Dunscroft.—Members of Primitive Methodist Chapel acquired site for permanent building.

Durham.—County E.C. been recommended by Director of Education to proceed with following:—Bishop Auckland grammar school (additions); Blaydon secondary school (additions), Chester-le-Street secondary school (classrooms), Consett secondary school (classrooms, domestic subjects centre and larger dining-hall), Durham Girls' County school (dining-room and classrooms), Jarrow secondary school (additions), Ryhope secondary school (alterations and additions), West Stanley Alderman Wood secondary school (additions), Washington secondary school (new dining-room and domestic subjects centre).—County E.C. to instal electric lighting at Waldridge-lane Council school and Waldridge infants Council school. Committee also considering installing electric lighting at Barnard Castle Council school. F. Willey, architect, 34, Old Elvet, Durham.

Eaglescliffe.—Parish Council considering scheme for omnibus shelter in Butts-lane.

East Hardwick.—R.D.C. considering houses at East Hardwick and Darrington.

Edinburgh.—Plans prepared for science laboratory at Strathan House College, Cannon-lane. Architects, Reid & Forbes, 17, Great Stuart-st.—Plans prepared for motor garage at Ravelstone Dykes. Architect, W. Patterson, St. Colme-st.—Plans approved by Dean of Guild Court:—reconstruction, etc., at Canning-st.-lane for Edinburgh College of Domestic Science. Architects, J. D. Cairns & Ford, 63, George-st.; demolition scheme and erection of oil pump station and other offices at Ashbank, Corstorphine-rd., Corstorphine. Architect, D. N. Mackie, Coltbridge Studio, Murrayfield; reconstruction and additions at 130 and 130a, George-st., architect, W. Bruce, 6, Rutland-sq.; reconstruction and additions to de-vulcanising department of the North British Rubber Co., Ltd., at Castle Mills, Viewforth, architect, F. E. B. Blane, 23, Rutland-sq.; reconstruction, etc., at 9, Atholl-gardens, for Edinburgh College of Domestic Science, architect, J. D. Cairns & Ford, 63, George-st.

Eton.—R.D.C. approved: houses, Beaconsfield-rd, Beckford & Littlewood.

Forehoe.—Clerk to R.D.C. received County Council's assent to building of 70 houses.

Gateshead.—Plans for 8 lock-up garages and a workshop in back Church-rd., Low Fell, near Gateshead, by T. Pringle, Low Fell, been approved.—Shop premises, High-st., been secured by Martins Bank, Ltd., who propose to convert them into bank premises.—W. E. Hall & Son, Ltd., Low Fell, near Gateshead, are to develop new building estate in Low Fell district, and erect 53 houses.—T.C. received sanction from M.H. to borrow £5,450 for purchase of land at Split Crow-rd., Carr Hill-rd., and Salt Meadows for housing purposes.

Glasgow.—Director of Education, 129, Bath-st., instructed to erect cookery room at Cloberhill school.—Education authority to erect new wall at Saracen-st. school at £1,442.—Plans prepared for oil store at Victoria-st., Caledonian Petrol Products, Ltd., Port Eglington. Architect, A. Watt, 2, Harvie-st., Ibrox, Glasgow; storage accommodation at Maryhill-rd., architect, H. Campbell Sutherland, Killermont; additions and reconstruction at Edward Collins & Sons, Ltd., Kelvindale Paper Mills, Kelvindale-rd.; additions to and alterations to property at McLellan-st., architects, J. Laird & Sons, 11, Bothwell-st.; reconstruction and additions scheme at 167, Adelphi-st., Hutchiestown, architects, Edgar & Crossar, Ltd., 18, Glassford-st.

Gt. Yarmouth.—T.C. approved: 4 houses, Cradock-av., H. R. Middleton & Co., Ltd.; new store and house, Southgates-rd., Trinity House Corporation.

Greenock.—Plans approved for new business, etc., premises at Main-st. Architects, Stewart, Tough & Alexander, 2, Hamilton-st., Cathcart.—Plans been prepared for church hall for Mid Parish Church at Bank-st. and Church-place. Architects, F. Burnett & Boston, 180, Hope-st., Glasgow.

Hamilton.—Branch bank at Cadzow-st., for British Linen Banking Co., Edinburgh. Architect, A. Cullen, 93, Cadzow-st., Hamilton.

Hebden Bridge.—Council received sanction from Ministry to borrow £542, for public conveniences at Breck Mill-yd.

Hinckley.—U.D.C. approved: Extensions to hosiery factories, Bennett Bros., Southfield-rd.

Hindley.—Rev. H. G. Armstrong-Buisseret, P.P., St. Benedict, Market-st., proposes parochial church hall, adjacent to Sacred Heart School, Swan-lane, Hindley Green. Plans prepared by Mr. J. O'Leary-Quinn, architect, 32, Richmond-rd., Cardiff.

Keighley.—W. H. & A. Sugden, Devonshire-bldgs., North-st., architects for extensions to "Reservoir" hotel, for Bentley's Yorkshire Breweries, Ltd., Eshaldwell Brewery, Woodiesford.

Keith.—T.C. decided to build 2 four-roomed houses and 3 three-roomed houses in Moss-st. G. S. Stewart, S.

Knutsford.—Commercial Estates, Ltd., 76, Mosley-st., Manchester, developing Mere Hall estate, Mere Corner, for housing site.

Lanarkshire.—Between Burgh of Rutherglen and the County of Lanarkshire, new bridge to be constructed by C.C. County Road Surveyor and Engineer, Hamilton.

Lanchester.—Privy conversion scheme involving 1,905 houses to be proceeded with by R.D.C. No contracts placed. G. W. Westgarth, S.

Leek.—Longden & Venables, 60, St. Edward-st.,

*See also List of Contracts, Competitions, etc.

architects for Sunday schools for Parochial Council of St. Luke's Church.

Liverpool.—T.C. proposing to proceed with road scheme from Pilch-lane, between Prescot-rd. and Grant-rd., at £22,323.—Port Sanitary Commmittee, alterations at Smithdown-rd. Hospital.—Council are purchasing property in various parts of town for improvement schemes.—Land at Allerton-rd. to be let to Director of Housing.—M.H. forwarded sanction of borrowing £1,742 for construction of South Return Embankment at Otterspool.—Subject to approval of B. of E. and sanction of M.H., E.C. to purchase property for house for caretaker of Brae-st. Council school.—Housing Committee to take steps to acquire all suitable sites in Woolton district on which to erect houses.

London (Bermondsey).—B.C. received L.C.C. sanction to £650 for housing.—Council also received sanction to £12,000 for Rotherhithe-st. housing scheme.—Inquiry to be held into application of B.C. to borrow £48,705 for baths in Grange-rd.—Plans passed:—London Electricity Supply Corporation, Ltd., 25a, Cockspur-st., S.W.1, for Peck Frean & Co., Keetons-rd., erection of electrical sub-station, Drummond-rd.

London (Deptford).—B.C. approved: A. Robertson & Sons, 27, Camberwell-green, S.E.5, 4 new lock-up shops, Endwell-rd.; Watney, Combe, Reid & Co., Ltd., Stag Brewery, Pimlico, S.W.1, additions, "Bricklayers' Arms" p.h., 23, Kender-st.; J. & A. Oldham, 108, New Cross-rd., addition, rear 72, Billington-rd., next to Brocklehurst-st.; Hodson Bros., 1, Shell-rd., S.E.13, building, rear of 51, Tressillian-rd.

London (Poplar).—L.C.C. have sanctioned £14,300 for Glaucus-st. housing scheme.

London (Woolwich).—B.C. to erect 4 houses at £1,992 on land at Eltham-hill, S.E.—Council proposing River Wharves development scheme at £25,567.—Plans passed:—J. Sutcliffe, B.E. for B.C., electricity sub-station, Flaxton-rd., Plumstead; R.A. Co-operative Society, Ltd., Albion-rd., Woolwich, addition to one-story building, 2, Lakedale-rd., Plumstead; Whincop & Channer, 54, Thomas-st., Woolwich, two-story building at rear, 105, Eltham High-st.

Lupset.—Plans prepared for billiard room and concert hall at Lupset W.M. Club. Tenders invited. Architects, W. Wrigley & Son, Wakefield.

Manchester.—J. Knight, F.R.I.B.A., 5, Cross-st., preparing plans for ice-skating rink, Norman-rd., Rusholme.—Threlfall's Brewery Co., Ltd., Cook-st Brewery, Salford, propose additions to "Whalley" hotel, corner, Withington-rd. and Upper Chorlton-rd., Brook's Bar, Manchester. Plans by B. Waterhouse, F.M.S.A., Architects' Department, Bury-st., Salford.—T. E. Davidson, Son & Sherwood, architects, 4, Rectory-drive, Gosforth, Newcastle-on-Tyne, preparing plans for church and Sunday school, Moseley-rd. and Green-drive, Rusholme.

Meriden.—R.D.C. approved:—6 houses, Old Chester-rd., Castle Bromwich, C. F. Price; 40 houses, Dorio and Rose-rds., Cole End, Coleshill, J. C. Payne; 10 houses, Woodclose-av., Coundon, J. H. Breeze.

Mexborough.—G. Fenwick Carter, S., preparing plans for 50 non-parlour type houses off Adwick-rd., for U.D.C.

Middlesbrough.—E.C. approved reconstruction of Ackham Hall as secondary school; erection of two schools and reconstruction of four existing schools. S. E. Burgess, B.E.

Newarthill.—Lanarkshire C.S. have improvement trust housing scheme and subsidy scheme for Newarthill County area. Architect, P. Smith, Clydesdale-st., Hamilton.

Newcastle.—Co-operative Society made arrangements for taking over sites on Armstrong-rd extension near Munition Cottages, and also another north of Fergnson's-lane, West Benwell, for purpose of erecting branches. Plans in preparation.

Newcastle-under-Lyme.—H. Goldstraw, A.R.I.B.A., "Crowstones" Bramnton-rd., architect for rebuilding "Fleur-de-Lys" inn in Watling-st. at Norton Canes, for Showell's Brewery Co., Ltd., Crosswells Brewery, Langley, Birmingham.

New Monkland Area.—Lanarkshire C.C. have scheme of houses for Caldercruix, etc., just approved. Architect, P. Smith, Clydesdale-st., Hamilton.

Newton-in-Makerfield.—U.D.C. propose 100 non-parlour houses. R. Lathom, S.

Nigg (Kincardineshire).—United Free Church of Scotland (Continuing) to build manse.

Paisley.—Plans prepared for housing scheme. Architect, J. Lee, B.E. and S.

Penrith.—U.D.C. received sanction to £37,000 for 120 houses.

Peterborough.—T.C. approved: V. Snow, for Hawkins & Son 10 houses, Lincoln-rd., Werrington; The Waverley Building Co., Ltd., for S. Dodson, alterations and additions to premises, Lincoln-rd., Walton; A. J. Campbell, for J. Gutteridge & Sons, Ltd., alterations to "Theatre Royal," Broadway.

Plains.—Lanarkshire C.C. to erect 48 houses under improvement trust. Architect, P. Smith, Clydesdale-st., Hamilton.

Rawtenstall.—Members of Rawtenstall and Waterfoot St. John Ambulance Brigade and Nursing Division proposing headquarters and ambulance hall.

Romiley.—Park Estates propose 500 houses on estate and reserve sites for shops off Sandy-lane.

Romiley.—Parochial Council of St. Matthew and St. Aidan's Church (Vicar, Rev. B. H. Whitford, 303, Lees-rd., Oldham) proposing buildings at £20,000. Plans by Taylor & Young, FF.R.I.B.A., 10, Chapel-walks, Manchester.

Rushden.—Billiard Hall in Duck-st., for D. E. Mitchell & Sons, Ltd., Billiards-arcade, Northampton.

Rutherglen.—Lanarkshire C.C. to erect school at King's-pk. Architect, J. Stewart, Education Offices, Motherwell.

Scarborough.—Contracts not placed for shops, flats and offices for T.C. H. W. Smith, B. E.

Shipley.—U.D.C. propose electricity sub-station at Crag-rd., Gaisby-lane, and Wrose-rd., at £11,000. Tenders invited.

Southampton.—Reconstruction of Southampton West Station been included in large scheme approved by directors of Southern Railway Co. Scheme is estimated to cost £170,000 to £180,000.

South Shields.—Housing Committee has under consideration scheme for 504 houses at £171,500. J. P. Watson, B.E.

Stanley.—U.D.C considering erection of 100 houses. Plans by S.

Stockport.—Members of St. Thomas' to expend £1,200 on restoration of outside fabric of church.—Industrial and Equitable Co-operative Society, Ltd., 27, Chestergate, proposing branch emporium on land adjacent to Bates' Ley Farm housing estate. Plans by Architects' Department, Balloon-st., Manchester.

Sunderland.—T.C. to be recommended by Housing Committee have plans prepared of roads and sewers for a further housing scheme in Newcastle-rd. for 154 houses.

Tidworth.—Hampshire C.C. to erect police station. Tenders invited.

Twickenham.—Plans passed by T.C.:—Brewer, Smith & Brewer, architects, additions, "Cole Court Hotel," London-rd.; P. Hoffman, 7 houses, Orford-gardens; H. M. Grellier & Son, architects, 58 houses, Warren and Nelson-rds.; and 4 shops with flats over, corner of Percy-rd.; Willment Bros., petrol filling station, office and store, Whitton-rd.

Upton.—R.D.C. seeking borrowing powers for child welfare clinic.

Uxbridge.—U.D.C. approved: Leybourne-rd. and Midhurst-gdns., Oak Farm estate, 187 houses, R. & H. Fletcher, Ltd.; Floriston-av. and Berkeley-rd., Oak Farm estate, 12 houses, J. Blade; The Rise Hillingdon Manor estate, 11 houses, R. T. Warren.

Westslade.—U.D.C. propose 100 houses. H. G. McNaught, S.

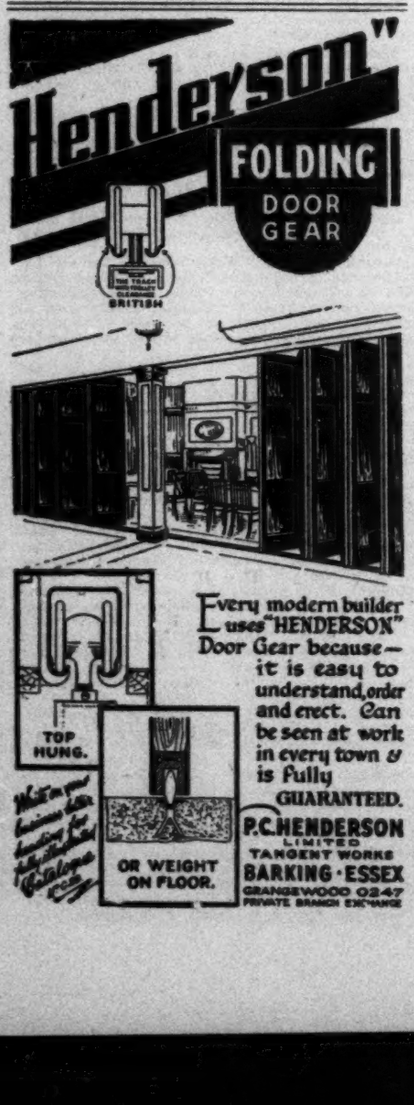
West Ward.—R.D.C. propose houses in 15 parishes of rural district. Spencer Sunter, S., 1, Brunswick-rd., Penrith.

Wimbledon.—B.C. to build on land at Malden Green, electricity sub-station.

Wolverton.—Owing to fact that men have been transferred from Crewe to L.M.S. Works at Wolverton, U.D.C. to approach the Radcliffe Trustees with view to obtaining land for 24 houses of non-parlour type.

Wrangle.—Parochial Council of SS. Mary and Nicholas Church are to restore roof at £700. Vicar, Rev. H. M. Harvie.

Wrightington.—J. Greaves Scholes, 23, Richmond-ter., Blackburn, architect for Sunday school, for Trustees of Parish Church.



TRADE NEWS

Cables at "Claridge's."

In connection with our illustrations of Claridge's Hotel in our last issue, we are informed that Messrs. Johnson and Phillips, Ltd., electrical engineers and cable makers, of Charlton, S.E.7, supplied all the electric cables for this extension.

Change of Address.

Messrs. Thorpe & Thorpe, Ltd., electrical engineers and contractors, have removed to Vincent House, Vincent-square, S.W.1 (telephone: Victoria 2793 and 2794), with a branch at Hartley, Wintney, Hants. The board of directors now consists of Mr. M. Campbell Jones, Mr. D. Winton Thorpe, A.M.I.E.E., and Mr. R. G. Sullivan.

Diesel Agricultural Tractor.

At the Smithfield Show, Messrs. Marshall, Sons and Co., Ltd., engineers, Gainsborough, are exhibiting their latest "Marshall" Diesel oil engine, 16½ b.h.p., and their latest Diesel agriculture tractor, rating 15/30 b.h.p. These two exhibits are power units which operate on heavy fuel oil at remarkably low running costs. The fuel consumption of the Diesel oil engine is about .48 lb. per b.h.p. per hour, and the tractor, taking the cost of heavy fuel oil at 4d. per gallon, is said to do an acre of ordinary ploughing at a cost of 5d., which is considerably lower than the figures resulting from the use of tractors running on paraffin or petrol.

Coloured Cements and Mixtures.

Architects are aware that coloured cements have been used in this country for a considerable period, but the general policy of cement-makers in the past has been to advocate the mixing of certain pigments with cement on the site—a process which calls for the utmost care to ensure even distribution. In selling coloured cement ready for use, the Cement Marketing Company feel that by saving the user this trouble they will be removing what has undoubtedly been a handicap to coloured concrete for ornamental purposes. This company has, moreover, gone a stage further than this. Coloured-concrete work calls for discrimination in the selection of the aggregate to ensure full brilliancy of colour and evenness of tone—particularly in the case of renderings. To enable the best results to be secured, the Cement Marketing Company also market their coloured cements mixed ready for use with a special white aggregate in proportions suitable for rendering.

Synchronous Time and Modern Building.

The successful architect is not the sort of man who would wait until everyone had a car before making allowance for garage space. Nor is he likely to delay making provision for electric clocks until they are as familiar here as in Canada and the United States. Even now, synchronous time is spreading very quickly in this country, bringing the boon of "Greenwich time all the time" to homes, workplaces, schools, and public buildings, putting an end to the manifold troubles associated with clocks that are neglected or unreliable. In many parts of the country, time-controlled A.C. mains make it easy to have Greenwich time continuously anywhere in the building without even the trouble of winding up or regulating a single clock. It is *not* quite so easy if a special plug point has to be installed for every clock—hence the wisdom of running the wiring to suitable points as the building is being finished. What will soon be a matter of course is for the moment an inexpensive but very desirable and attractive little extra. We have received details of the synchronous electric clocks manufactured by Smith's English Clocks, Ltd., which are to be had for wall and mantel use in over 100 designs, suitable for drawing-room, dining-room, hall, kitchen, and bathroom use. They are dead silent in operation. They need no attention or oiling and consume only a few pence worth of current a year. These clocks are British throughout and are made under British patents.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

[PRINCIPAL CHANGES OF THE WEEK.—No changes are recorded.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Fletton, at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
Do., Bullnose	3 5 3	Blue Wire Cuts	7 5 0
White Midhurst Facing Bricks (delivered London)	5 0 0		

Best Stourbridge Fire Brick:—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
Headers	20 10 0	D'ble Headers	26 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	One Side and two Ends	30 10 0
		Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours Hard Glaze £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. "	3 6

	s. d.	
Thames Ballast	8 0	per yd
Pit Sand	11 0	"
Thames Sand	11 0	"
Best Washed Sand	11 6	"
¾ in. Shingle for Ferro-Concrete	8 6	"
½ in.	11 0	"
¾ in. Broken Brick	10 6	"
Pan Breeze	8 0	"

delivered 2 miles radius Paddington

Per ton delivered in London area in full van loads.
Best Portland Cement. British Standard Specification. Test £2 2 0 to £2 4 0
35s. alongside at Vauxhall in 80-ton lots.

	£ s. d.
Ferrocrete per ton extra on above	0 7 6
Vitocrete " "	0 7 6
Super Cement (Waterproof)	12 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaste ,Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—
At Nine Elms, per ft. cube 3 11

HOPTON-WOOD STONE—

	s. d.
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P. ft. cb.	14 0
Sawn two sides ..... "	22 6
Sawn three or four sides ..... "	27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London

6 in. sawn two sides landings to sizes (under 30 ft. super) .....Per ft. super	5 6
6 in. rubbed two sides, ditto..... "	6 0
2 in. sawn two sides slabs (random sizes) "	2 3½
1½ in. to 2½ in. sawn one side slabs (random sizes) ..... "	1 6½
1½ in. to 2 in. ditto, ditto ..... "	1 3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks .....Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) .....Per ft. super	5 1½
6 in. rubbed two sides, ditto ..... "	6 1½
4 in. sawn two sides slabs (random sizes) "	2 1½
3 in. ditto ditto "	2 10
2 in. self-faced random flags.....Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	2 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.
1 × 11 ..... £22 10 | 1 × 9 ..... £21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅞	16/-	1½	25/-
1	17/-	1¼	27/6
1½	20/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.
1	21/-
1¼	26/-
1½	27/6

MATCHING (BEST).

Inches.	per sq.
⅞	15/-
1	16/6
1¼	20/-

	s. d.
1ins. BATTENS.	
⅞ × 2.....per 100 ft.	2 0
SAWN LATHS.	
Per bundle	2 3

1 INCH AND UP THICK.
Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	£4 10 0 to —
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 0 0	18 by 10	17 5 0
22 by 12	27 19 6	18 by 9	15 10 0
22 by 11	25 5 0	16 by 10	14 14 6
20 by 12	24 7 6	16 by 8	11 5 0
20 by 10	20 17 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£5 2 6
ditto hand-made ditto	5 7 6
Ornament l ditto	5 12 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Machine-made	0 9

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£12 10 0
Plain Compound Girders	14 10 0
Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅝ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	62½	50	45	47½	55	57½
Water	58½	46½	40	42½	50	52½
Steam	55	42½	35	37½	45	47½
Galv. gas	50	37½	35	37½	45	47½
Galv. water	45	32½	30	32½	40	42½
Galv. steam	40	27½	25	27½	35	37½

*C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	10d.	7½d.	2½d.
3½ in.	10½d.	8½d.	2½d.
4 in.	10½d.	9½d.	2½d.
4½ in.	11½d.	10½d.	2½d.
5 in.	1/1½	11½d.	3½d.

*O.G. GUTTERS.

3 in.	1/0	10½d.	2½d.
3½ in.	1/0½	10½d.	2½d.
4 in.	1/1½	10½d.	2½d.
4½ in.	1/2½	1/0½	2½d.
5 in.	1/5	1/2½	3½d.

*RAIN-WATER PIPES, &c.

Per yd. in 6 ft. Pipe.		Bends, stock Branches, angles, stock angles.	
2 in. plain	1/2½	9½d.	1/2
2½ in. "	1/3	10½d.	1/4
3 in. "	1/6½	1/1½	1/6½
3½ in. "	1/11	1/4½	1/11½
4 in. "	2/2½	1/7½	2/4½

*The above R.W. Goods prices are subject to an advance of 5% from October 29th, 1929.

L.C.C. COATED SOIL PIPES—London Prices ex Works

	Bends, stock Branches. Pipe, angles, stock angles. s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 1½	1 6½	1 10½
2½ in. "	2 6	1 8½	2 4
3 in. "	2 8	1 10½	2 9½
3½ in. "	2 10½	2 4	3 3
4 in "	3 3	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Bends, stock Branches, Pipe, angles, stock angles. s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	3 6	4 3	6 3
	cwt. qr. lbs.		
4 in. "	1 1 20	4 9	5 2 8 10
5 in. "	1 2 22	6 3	9 0 14 3
6 in. "	2 0 6	6 11	10 11 18 1

Caskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.	£ s. d.
IRON—		
Common bars	10 10 0 to	11 0 0
Staffordshire Crown Bars Good merchant quality	10 15 0 to	11 10 0
Staffordshire Marked Bars	14 0 0 ...	15 0 0
Mild Steel Bars	9 19 0 ...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0 ...	9 0 0
Hoop iron, basis price	11 0 0 ...	12 0 0
" Galvanised ...	27 0 0 ...	28 0 0
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g. ...	11 0 0 ...	11 10 0
" " " 24 g. ...	12 0 0 ...	13 0 0
" " " 26 g. ...	14 0 0 ...	15 0 0
Sheets Flat Best Soft Steel, O.R. and O.A. quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13 10 0 ...	14 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 10 0 ...	15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 10 0 ...	18 10 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes 6 ft. to 9 ft. to 20 g.	13 0 0 ...	14 0 0
Ordinary sizes 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0 ...	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0 ...	17 10 0
Sheets Galvanised Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18 0 0 ...	19 0 0
Best Soft Steel Sheets. 22 g. and 24 g.	20 0 0 ...	22 0 0
Best Soft Steel Sheets, 26 g.	21 10 0 ...	23 0 0
Cut Nails, 3 in. to 6 in. ...	15 0 0 ...	16 0 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	23 0 0
Pipe in coils	23 10 0
Soil pipe	26 10 0
Compo pipe	27 0 0

NOTE.—Country delivery, 20s. per ton extra: lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton £13 0 0

COPPER.

	s. d.
Seamless Copper tubes (basis) ..... per lb.	0 9½
Strong sheet ..... "	0 10
Thin ..... "	0 11
Copper nails ..... "	1 0
Copper wire ..... "	0 11

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
29/- 45/- 76/- 153/- 246/- 510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
41/6 62/- 92/- 174/- 300/- 588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.
½ in. ¾ in. 1 in.
30/6 60/- 116/6 per doz.

CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
7/6 10/- 14/- 23/- 30/- 42/- per doz.

DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
7/6 11/- 17/- 28/- 36/- 63/- per doz.

BRASS SLEEVES.
1¼ in. 2 in. 3 in. 3½ in. 4 in.
10/- 12/- 20/- 24/- 31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.P.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
35/- 56/- 98/- 162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.
1¼ in. 1½ in. 2 in. 3 in.
8 lbs. P. traps ... 33/- 41/- 56/- 101/- per doz.
8 lbs. S. traps ... 35/- 45/- 66/- 126/- "

TIN.—English Ingots, 1/4 per lb. SOLDER.—Plumber's 8d., Tinmen's 9d., Blowpipe 10d. per lb.

*The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*cont.*)

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes ..... per gallon ...	0 2 3
" " " in barrels ... " ...	0 2 5
" " " in drums ... " ...	0 2 8
Boiled " " in barrels ... " ...	0 2 8
" " in drums ... " ...	0 2 10
Turpentine in barrels	0 4 4
" in drums (10 galls.) " ...	0 4 7
Genuine Ground English White Lead, per ton	47 10 0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morpanwyte," "Polaco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5 cwt. lots. £ s. d.
per ton delivered ... 55 10 0

Red Lead, Dry (packages extra) ... per ton	32	0 0
Best Linseed Oil Putty ..... per cwt.	0	13 6
Size. KD quality ..... firn.	0	3 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths	7½d.
15 " thirds ...	3½d.	32 " thirds	9½d.
21 " fourths ...	3½d.	Obscured Sheet, 15 oz.	3½d.
21 " thirds ...	4½d.	" 21 oz.	4½d.
26 " fourths ...	4½d.	Fluted, 15 oz. 7d., 21 oz.	9½d.
26 " thirds ...	7½d.	Em'lled, 15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
Rough rolled	8½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.

	Per foot. s. d.
Clear sheet—not exceeding 1 foot	1 0
Do. do. 2 feet	1 3
Do. over 2 feet	1 9
Polished plate—not exceeding 1 foot	1 6
Do. not exceeding 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
Do. larger sizes	1 6
Horticultural—for greenhouses, etc. Sizes up to 24 inches by 18 inches or not exceeding 8 feet	1 0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2 6

VARNISHES, &c.

	Per Gallon. £ s. d.
Oak Varnish ..... Outside	0 14 0
Fine ditto ..... ditto	0 16 0
Fine Copal ..... ditto	0 18 0
Pale Copal ..... ditto	1 0 0
Pale Opal Carriage ..... ditto	1 4 0
Best ditto ..... ditto	1 12 0
Floor Varnish ..... Inside	0 18 0
Fine Pale Paper ..... ditto	0 18 6
Fine Copal Cabinet ..... ditto	1 2 6
Fine Copal Flatting ..... ditto	1 0 0
Hard Drying Oak ..... ditto	0 18 0
Fine Hard Drying Oak ..... ditto	0 19 6
Fine Copal Varnish ..... ditto	1 0 0
Pale ditto ..... ditto	1 12 6
Best ditto ..... ditto	1 2 6
Best Japan Gold Size	0 12 0
Best Black Japan	0 10 0
Oak and Mahogany Stain (water)	0 12 0
Brunswick Black	0 7 0
Berlin Black	0 14 0
Knotting (patent)	1 5 0
French and Brush Polish	0 17 0
Liquid Dryers in Terebene	0 9 0
Cutress Black Enamel	0 7 0

A Builder's Estate.

Mr. J. R. Tomkins, of Camberwell-grove, Camberwell, S.E., retired builder and ex-mayor of Camberwell, left £20,624, with net personalty £11,965.

A Technology Report.

The report on the work of the Department of Technology, City and Guilds of London Institute, London, for the session 1930-31, contains the fact that the number of candidates for examination in technical subjects in the British Isles increased by 865 in a total of 15,586 in 1931, in spite of a small decrease of 58 in the number of Scottish and Irish candidates. Plumbers' work (92), electrical installation work (77) and brickwork and masonry (32) were among the subjects for which an increased number of candidates sat. The entries for the Institute's examination for teachers' certificates in handicraft continued to show an increase by 355 to a total of 2,006. Excellent all-round progress can be noted. Price 1s. net, the Report is published by John Murray, Albemarle-street, W.1.

THE SCOTTISH BUILDER

NEW BUILDINGS

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Tuesday evening.*

Edinburgh.—BUILDING.—Mr. E. J. MacRae, A.R.I.B.A., City Architect, has prepared plans for a transformer house at Milton-road and 48 houses at Middrie Mains housing site, for the T.C. No contracts have yet been placed.

Edinburgh. — BUILDING. —The Edinburgh Dean of Guild Court has granted the following:—Hepburn Brothers, three bungalows and six bungalows at March-road and Carfrae-road, Blackhall; George Mason Kay, three double bungalows at Featherhall-crescent South, Corstorphine.

Edinburgh.—RECONSTRUCTION.—The George Heriot's Trust are inviting tenders for the demolition of buildings, reconstruction of existing buildings, and erection of new buildings to form new primary school and new technical department at George Heriot's School, Lauriston-place. The architects are Messrs. Reid and Forbes, 17, Great Stuart-street.

Glasgow.—BUILDING.—Glasgow Dean of Guild Court has approved of plans for the erection of a chapel at Cardonald. The scheme was submitted by the trustees for the Poor Sisters of Nazareth, 1647, Paisley-road West, Cardonald. Other linings granted by the Court included:—James Taylor (Trongate), Ltd., 132, Trongate, to demolish part of the existing building and reconstruct at 114 Trongate; Albion Greyhounds (Glasgow), Ltd., 200, St. Vincent-street, to erect shelters for the Totes and kennels, Broomloan-road, Ibrox; Glasgow Young Women's Christian Association, to erect a hall at Tullis-street; Equitable Life Assurance Society, 19, Coleman-street, London, to carry out alterations and additions to property at 193, St. Vincent-street; Wilson Brothers, Pinkston-road, to erect a garage and private lock-ups at Kelvindale-road; William Shaw and Son, Ltd., 94, Commerce-street, to erect four houses at Helensburgh-drive, Jordanhill.

Housing in Edinburgh.

Mr. E. J. MacRae, Edinburgh City Architect, in a report to the Public Health Committee on housing progress, states that of the total of 1,507 houses in the year's programme, only 272 had been completed, leaving a balance of 1,239 still to complete. Expectations, he stated, had been upset by the weather. The past summer had been a particularly wet one, and the weather in June, July and August was so bad that very little progress had been made with the initial work on a number of the large contracts. In addition, the contractors had experienced considerable difficulty with regard to an adequate supply of bricks and slates. They had been unable to obtain sufficiently large supplies locally, and were now bringing bricks from the West of Scotland. Arrangements had now been made for a regular supply sufficient to meet their needs.

BUILDING TRADE WAGES IN SCOTLAND*

The following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'† Plasterers'.†
Aberdeen	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Arbroath	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Ayrshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2 1/8
Berwickshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/7	†1/2½
Broughty Ferry	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Clackmannanshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Dumbartonshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dumfries	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Dumfriesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Duncon	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
East Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Edinburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Forfarshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Fort William	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/2
Galashiels	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Glasgow	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	1/2½
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/2½
Hawick	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Helensburgh	1/7	1/7	1/7	1/8½	1/7	1/7	1/7	‡1/2½ †1/2½
Inverness	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	10d.–1/2
Inverurie	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/7	1/2
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kincardineshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Kinross-shire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Kirkwall	1/5	1/5	1/5	1/6	1/5	1/5	1/7	1/–
Lanarkshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Midlothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	‡1/2½ †1/2
Peeblesshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Perthshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
Peterhead	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/7	1/2
Renfrewshire	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Rothesay	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Roxburghshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1½
St. Andrews	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Selkirkshire	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/7	‡1/2½ †1/2½
Stirlingshire, West	1/6	1/6	1/6	1/6	1/6	1/6	1/7	1/1
Stornoway	1/6	1/6	1/6	1/7	1/6	1/6	1/7	1/1
West Lothian	1/7	1/7	1/7	1/8	1/7	1/7	1/7	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 932.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	"	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	" "	6	0
Add if in floors 6 in. thick	" "	2	6
Add if in beams	" "	3	0
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	"	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork:—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	"	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarte -inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	"	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	20	0
Chilmark stone fixed complete	" "	17	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	4	3
Do. joists	" "	4	9
Do. roofs, floors and partitions	" "	5	3
Do. trusses	"	7	9

		¾"	1"	1½"	2"
Deal rough close boarding	per sq.	33/6	38/-	43/-	70/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	0	9
Centre for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1½"	1½"
Deal-edges shot	per sq.	—	42/6	50/-	57/6
Do. tongued and grooved	"	—	47/-	56/-	64/-
Do. matchings	"	44/-	49/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	"	3	9

DOORS

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	"	2/4	2/6	2/9
Two-panel moulded both sides	"	2/6	2/9	2/11
Four-panel Do. Do.	"	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued		2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail average, 3 in. × 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	"	1/6	1/9	2/3	2/9
Rain-water pipes with ears	"	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	"	1/6	1/10	2/9	3/3
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. in flats	"	39	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/1	1/7	1/10	3/-	3/6	—
Do. service	"	1/6	2/-	2/5	3/6	—	—
Do. soil	"	—	—	—	—	—	6/-
Bends in lead pipe	each	—	—	—	—	3/-	6/6
Soldered stop ends	"	1/-	1/4	1/9	2/6	3/2	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws	"	—	—	—	12/7	17/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add saw lathing	" "	1	7
Add metal lathing	"	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	3

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	7½
26-oz. Do.	" "	0	10
Obscured sheet	" "	1	1
¼-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	3

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10%, on the prime cost without establishment charges. A percentage of ½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Accrington.—Extensions to Spring Hill Council school, for the E.C. Mr. H. Sanderson, surveyor:—

*W. Livesey & Sons, Ltd., Novia Scotia Saw Mills, Blackburn	£8,079

Barnet.—Erection of a steward's house at the Wellhouse Hospital, for the Hertfordshire C.C. Messrs. Saxon, Snell & Phillips, architects, 9, Bentinck-street, Manchester-square, W.1:—

F. Parvin, Ltd., Mill Hill	£1,350
Hammond & Barr, Chelsea	1,187
C. W. Scott, Ltd., Finchley	1,162
Thos. Cole, Ltd., Barnsbury	1,091
H. E. Winskell, Barnet	1,078
John Ray, Ltd., Letchworth	998
J. McKenzie, Hendon	995
C. E. Galpine & Son, Heston	974
W. T. Briers, Boreham Wood	972
E. J. & P. Bower, Barnet	949
E. Hulse & Son, Welwyn	927
Turner & Payne, Finchley	890
H. & C. Janes, Luton	874
H. J. & A. Wright, Gt. Missenden	860
†H. Gray, Barnet	749

Basford.—20 non-parlour type houses in pairs, together with drainage, paths and fences, in the parish of Selston (Underwood Ward), for the R.D.C. Mr. Stephen Maylan, engineer and surveyor. Quantities by the engineer:—

Geo. Tyson, Nottingham	£8,100
W. J. Gregory, Colwyn Bay	7,453
J. Wildman, Langley Mill	7,168
S. Hogg, Codnor	6,940
G. Brentnall, George-street, Riddings	6,884
Harris Bros., Marehay	6,656
Hofton & Sons, Beeston	6,559
A. H. Harris & Sons, Marehay	6,546
J. Minkley, Brinsley	6,525
Geo. Hutchinson & Sons, Ltd., Sutton-in-Ashfield	6,524
F. Sisson & Sons, Langley Mill	6,309
Harper & Green, Ltd., Carlton	6,157
R. J. Jewell & Son, Ltd., Dunkirk	6,148
Allcock & Sisson, Eastwood	5,937
*R. Hustwayte, Haydn-road, Sherwood	5,900

Bath.—Sub-station at Kingsmead flats, for the T.C.:—

*F. J. Amery & Sons, Ltd.	£125

Bath.—Repairs to cottages at Batheaston, for the T.C.:—

*W. H. Moss & Son	£210

Batley.—Warehouse at the New Ing Mills, for Messrs. J. Blackburn & Co., Ltd.:—

*G. J. Mortimer, Ltd.	

Bedlington.—50 houses for aged people at Bedlington Station, for the U.D.C. Mr. J. W. Pooley surveyor:—

*E. J. Phillipson & Son, Bedlington Station.	

Belfast.—Erection of Grosvenor public elementary school in Roden-street, for the T.C. Education Architect, Victoria-street:—

*Copeland & Sons, Lower Windsor-avenue, Belfast	£25,248

Birmingham.—Five classrooms, assembly hall, cloakroom and other additions at Yarnfield-road Council school, for the E.C. Mr. H. T. Buckland, F.R.I.B.A., architect to E.C., Norwich Union-chambers, Congreve-street:—

Building work—	
*E. A. Turner, King's Heath, Birmingham	£4,290
Heating installation—	
*Rosser & Co., Lionel-street, Birmingham	282
Lighting installation—	
*Davis & Millward, Birmingham	132

Birmingham.—Installation of heating apparatus at Selly Park Council school, for the E.C.:—

*J. Jackson & Co., Birmingham	£504

Brierfield.—Refuse destructor building, on site adjoining sewage disposal works, for the U.D.C. Mr. W. D. Haigh, engineer and surveyor:—

*C. Muff & Son, Barnoldswick.	

Bristol.—Two above-ground sub-stations at Minaroad and Goodneston-road, Fishponds, for the T.C. Mr. H. Faraday Proctor, Chief Engineer and General Manager, Electricity Offices, Colston-avenue:—

*Wm. Britton & Sons (Bristol), Ltd., Clement-street, St. Pauls, Bristol.	

Bristol.—New engine shed, lifting shop, coal stage, offices and other works at Bristol (Bath-road), for the G.W.R. Chief Engineer, Paddington Station, W.2:—

*E. C. Jordan & Son, Harrow-road, Newport (Mon).	

Bury.—Extensions to Bridge Hall dye works, for Messrs. Crossland & Pickstone, Ltd.:—

Builders—*J. Tinline, Ltd., Bury.
Plumbing—*G. Brown & Son, Tottington.
Slaters—*J. Kay & Sons, Bury.

Cambridge.—X-ray department at Addenbrooke's Hospital, for the General Committee of the Hospital. Messrs. Pick, Everard, Keay & Gimson, architects and surveyors, 6, Millstone-lane, Leicester:—

*John Bignell, Newmarket-road, Cambridge	£5,850

Canterbury.—Masonic library and museum, for the Province of Kent. Mr. F. G. Hayward, architect and surveyor, Market-square, Dover:—

C. I. Epps, Ltd., Ashford	£4,717
Thomas & Edge, Ltd., Woolwich	4,170
Strange & Sons, Tunbridge Wells	3,988
John Jarvis, Ltd., Tunbridge Wells	3,968
Turner & Watts, Sandwich	3,939
W. Shipham, Ashford	3,838
T. T. Denne, Ltd., Walmer	3,805
W. Lawrence & Son, Finsbury Square	3,800
Curtis & Caine, Ltd., Borough Green	3,767
G. H. Deane & Son, Deal	3,742
J. W. Ellingham, Ltd., Dartford	3,734
E. J. Barwick, Dover	3,715
Grummant Bros., Ramsgate	3,714
Hayward & Paramor, Folkestone	3,693
G. Lewis & Son, Dover	3,690
R. Elliott & Co., Margate	3,685
J. W. Harris, Mayfield, Sussex	3,595
R. Webster, Folkestone	3,557
G. E. Wallis & Sons, Maidstone	3,546
G. Browning, Canterbury	3,495
Elmore & Son, Maidstone	3,483
O. L. Taylor & Son, Sittingbourne	3,462
Rice & Son, Margate	3,456
Cox Bros., Maidstone	3,406
E. W. Martin, Ramsgate	3,389
J. E. Wiltshire & Co., Canterbury	3,291
W. W. Martin, Ramsgate	3,235

Catterick.—Additions and alterations to the Church of England schools. Mr. H. D. Pritchett, F.R.I.B.A., architect, 12, High-row, Darlington:—

Bricklayer and carpenter and joiner—*F. Coates & Sons, Catterick.
Slater—*Atkinson & Son, Darlington.
Plasterer—*W. B. Brownless, Darlington.
Plumber—*T. Jolson, Darlington.
Painter—*Wray & Son, Catterick.
Heating—*Richardson & Co., Darlington.

Chester-le-Street.—136 houses at Fatfield and Birtley, for the R.D.C. Mr. M. Wilson, Council's architect:—

*Direct labour.	

Just a scrub . . . . a rinse and the work has dried quickly ready for paint.

The quick and efficient way in which "Manger's" cleans all paintwork is greatly appreciated by Decorators.

Quicker final drying, non-greasy finish; consistent quality and strength are further points in favour of "Manger's"; also its specially lined fit-the-pocket carton.

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GD/8

Chesterfield.—Houses, for the Corporation:—

46 houses, Newbridge-lane—	
*G. Rowley	£15,621
5 houses, Stand-road—	
*J. Shearston	1,840
28 houses, Lucas-road—	
*Walters & Westley, Ltd.	9,653

Crompton.—Extensions to Crompton Hall secondary school, for the Church of England Authorities. Mr. F. Thorpe, F.R.I.B.A., architect, Union Bank-chambers, Church-lane, Oldham:—

Builder—*Isaac Pogson, Shaw.
Joiner—*Square, Ashton & Sons, Ltd., Oldham
Plumbing—*W. B. Stott, Ltd., Royton.
Masonry—*S. & J. Whitehead, Oldham.
(Estimated cost, £4,000.)

Denbighshire.—Manual instruction and science department at Llanrhaiadra-yn-Mochmant, near Oswestry, for the E.C. Mr. W. D. Wiles, County Architect, Acton Hall, Wrexham:—

†W. F. Humphreys & Co., Wrexham.	

Donegal.—New waterworks at Stranolar, for the B. of H.:—

R. Colhoun	£5,410

Dublin.—72 three-roomed type flats on the St. Mary's-lane site, for the T.C.:—

*H. & J. Martin	£27,894

Durham.—Installation of electric light in (*a*) Crook Council school, and (*b*) Helmington-row Council school, for the County E.C.:—

*J. Robson	(*a*) £266
*J. Robson	(*b*) £146

Ealing.—Extensions to premises of Messrs. John Sanders, Ltd., The Broadway. Messrs. Hall-Jones & Dewhirst, architects, Ealing:—

General contractors—*A. & B. Hanson, Ltd., Southall.
Steelwork—*Redpath, Brown & Co., Ltd.
Shopfitting—*Parnall & Sons, Ltd., Sessions House, Clerkenwell Green, E.C.1.

Elstree.—Additions to Keystone Knitting Mills, Elstree, for Messrs. Grace & Hughes:—

*W. H. Gaze & Sons, Ltd., Kingston-on-Thames.	

Epping.—20 houses at Theydon Bois, for the R.D.C.:—

*W. A. Newburn & Co., Nettleswell	£6,085

Esher.—House, for Messrs. W. Curtis, Green & Partners:—

*W. H. Gaze & Sons, Ltd., Kingston-on-Thames.	

Glasgow.—Electric lighting and electric heating installations at Garngad-road temporary school, for the E.C. Mr. W. McCraig, Education Architect, Bath-street:—

*D. Henderson, 80, Great Western-road, Glasgow	£366 2

Glasgow.—Houses at Kelvinside. Mr. Joseph Wilson, architect, 141, Bath-street:—

*Western Heritable Investment Co., Ltd., 65, Bath-street, Glasgow.	

Glasgow.—School work, for the E.C. Mr. W. McCaig, education architect, 129, Bath-street:—

Lambhill-street public school—heating engineer's work—	
*J. Coombe & Son, Ltd., 103, North Hanover-street	£3,276 8 6
Possil school extension, Possilpark—heating installation work—	
*Tomlinson & Polding, 87, Clyde Ferry-street, Stobcross	3,176 5 0
St. John's R.C. school annexe—heating installation work, etc.—	
*J. Coombe & Son, Ltd., 103, North Hanover-street	1,529 7 2
Education Authority garage, Buchanan-street—painting work, etc.	
*A. Stirling & Sons, 533, Springburn-road, Springburn	208 0 0
(All of Glasgow.)	

Glasshoughton.—6 houses at Joffre-avenue:—

*Armitage Bros.	

Greenock.—Industrial premises, for the Greenock Harbour Trust at Main-street. Engineer, Custom House Quay:—

*Greenock Harbour Trust.	

Guildford.—Congregational schools, for the Trustees. Mr. H. Kelsall Armitage, architect, 130, Haverstock-hill, Belsize Park, London, N.W.3. Quantities by Mr. T. Sumner Smith, F.S.I., Clifton Lodge, The Crescent, Victoria-park, Manchester:—

*George Worboys, London-road, Wembley.	

Guildford.—Reconstruction of St. Mary's churchyard wall, for the T.C.:—

*Streeter & Co., Ltd.	£252 16 10

Hucknall.—Pit-head baths at Linby Colliery, for Miners' Welfare Committee. Mr. J. H. Forshaw, architect, Mines Section, Dean Stanley-street, Millbank, London, S.W.1:—

*Greenwood's (Mansfield), Ltd., Mansfield.	

Huddersfield.—Extensions to the Ramsden Mills at Linthwaite, for Messrs. Taylor, Livesey & Co., Ltd., Paddock Mills. Messrs. Lunn & Kaye, architects, Milnsbridge:—

*Walker Bros., Golcar, near Huddersfield.	

Ireland.—The following contracts have been placed by the Commissioners of Public Works:—
Athea Garda Station, Co. Limerick—erection of station—G. Downes, Hospital.
Don N.S., Co. Roscommon—improvements—John Coyne, Castlerea.
Dublin Castle—reconstruction of roofs—Owen Smith, St. Alban's-road, S.C.-road.
Dunmore Garda Station, Co. Galway—erection of station—Fleming & Co., Dunmore.
Nunciature, Phœnix-park—building works—John Kenny & Sons, Dublin.

Irlam.—Vestries, alterations to chancel and sanctuary of St. John's Parish Church, for Vicar, Rev. W. Lee, and Churchwardens. Mr. Robert Martin, L.R.I.B.A., Diocesan Surveyor, 90, Deansgate, Manchester:—
Builders—
*Brew Bros., Cadishead.
Stonework—
*J. & E. Moores Bros., Higher Ardwick.

Isle of Man.—New secondary school at Ramsay, for the E.C. Messrs. C. B. Pearson, Son & Duffy, F. & A.R.I.B.A., architects, 18, Dalton-square, Lancaster:—
*J. McArd & Sons, Crofton, Port Erin £25,000

Knaresborough.—4 parlour and 3 non-parlour houses on Beech-hill area, for the U.D.C. Mr. S. Blenkhorn, architect, Westminster Bank-chambers:—
Bricklayer and excavator—
*Wm. Birch & Sons, Ltd., York £1,724 4 4
Carpenter and joiner—
*Wardman & Forrest, Harrogate ... 510 0 0
Plumber—
*A. W. Clegg, Knaresborough ... 420 0 0
Tiler—
*J. Bradley, Knaresborough 188 10 0
Plasterer—
*R. R. Lowell, Knaresborough ... 205 10 0

Leicestershire.—Adaptation of Stretton Hall, for the C.C. Mr. W. Keay, County Architect, County Offices, 10, New-street, Leicester:—
†Hedley V. Batchelor, Fleckney £4,933

Letchworth.—New factory at Icknield-way, for the First Garden City, Ltd.:—
*John Ray, Ltd., Letchworth.

Liverpool.—Painting of open-air treatment balconies at Alder Hey Hospital, for the T.C.:—
*W. Clarkson, Liverpool £117 17 6

Liverpool.—41 type B.N.950 houses, 22 type A.950 houses, and 312 type A.710 houses on the Dovecot estate (portion No. 5), for the T.C. Director of Housing:—
‡Walter Spencer, Bull Bridge, Aintree, Liverpool £126,177

Liverpool.—36 dwellings at Burlington-street, for the T.C. Director of Housing:—
‡J. Lewis, 13a, Laurel-road, Fairfield, Liverpool £19,000

Liverpool.—Electrical installation in 118 tenements at Dingle-lane, for the T.C. Director of Housing:—
*J. Stott & Sons, Ltd., Corinthian Buildings, 16, South Castle-street, Liverpool £996

Liverpool.—Bowls pavilion, shelter and conveniences at the Springwood-gardens and recreation-ground, for the T.C. Land Steward and Surveyor:—
*Turner & Moss, 7-23, King-street, Garston £805

¶London.—Tenders accepted by H.M.O.W. for the week ending November 28:—
Norwood Branch Post Office—alterations—E. Orpin & Son, 92, Anerley-road, Upper Norwood.
Elmbridge Telephone Exchange—heating and hot water service—Heath & Co., 78, Abinger-road, Chiswick.
British Museum Repository—electric goods lift—Etchells, Congdon & Muir, Ltd., 25, Mill-street, Ancoats, Manchester.
National Physical Laboratory, William Froude Laboratory—rails and sleepers—Markham & Co., Ltd., Broad Oak Works, Chesterfield.

¶London.—H.M. Air Ministry accepted the following for the week ending November 21:—
Abingdon—underground cables—Electrical Installations, Ltd., 27, Martin-lane, E.C.4.
Peterborough—water supply and drainage—F. Hossack & Son, Ruskington, near Sleaford, Lincs.

London.—Provision and fixing of hot water heating supply and ventilation apparatus, and for alterations to existing apparatus in connection with the adaptation and extension of the London school of printing and kindred trades, for the L.C.C.:—

The Fretwell Heating Co.	£2,290
J. & F. May	2,113
Dent & Hellyer, Ltd.	2,080
The Brightside Foundry & Engineering Co., Ltd.	2,019
William Freer, Ltd.	1,998
Clark, Hunt & Co., Ltd.	1,935
Thames Bank Iron Co., Ltd.	1,880
W. G. Cannon & Sons, Ltd.	1,873
H. J. Cash & Co., Ltd.	1,838
*The National Heating Co. (1928), Ltd., 41, Westminster Bridge-road, S.E.1	1,649

(Architect's estimate, £1,893.)
(All of London.)

London.—Electrical installation at Paddington technical institute, for the L.C.C.:—

Smethurst & Co. (London), Ltd.	£3,585 0
Coleby & Co.	3,400 0
Leonard G. Tate & Co., Ltd.	2,983 0
Pinching & Walton	2,665 0
W. H. Gaze & Sons, Ltd.	2,619 0
Electrical Installations, Ltd.	2,440 0
A. Dean & Co., Ltd.	2,407 12
Alex. Hawkins & Sons	2,385 0
Buchanan & Curwen	2,268 0
H. J. Cash & Co., Ltd.	2,250 17
T. Clarke & Co., Ltd.	2,171 17
*Barlow Brothers & Co., Albion House, New Oxford-street, W.C.1	2,119 10
(Reduced to	£1,948 10)

(Chief Engineer's estimate, £2,475.)
(All of London.)

London.—Cleaning, painting and minor repairs at Council schools, for the L.C.C.:—

		Empire materials.
Camberwell, N.W.—Albany-road—		
G. E. Wallis & Sons, Ltd.	£1,628 0	£1,658 0
Sykes & Son, Ltd.	1,428 8	1,428 8
Lister & Co. (Builders), Ltd.	1,292 0	—
Castle Bros., Ltd.	1,276 0	1,276 0
W. J. Dixon & Sons	1,172 0	1,172 0
Higgs & Hill, Ltd.	1,161 0	1,161 0
J. Scott Fenn, Ltd.	1,149 10	1,157 17
W. R. Payne & Sons, Belfast House, Shipley	1,031 0	*1,061 0
(Architect's estimate, £1,170.)		
Rotherhithe—Rotherhithe New-road—		
R. J. Truscott	(a)	(a)
A. O. Newman, Ltd.	1,481 0	1,529 0
H. W. Spinks	1,428 0	1,491 0
W. H. Wagstaff & Sons	1,360 0	1,373 0
George Barker	1,366 0	1,411 0
Simms (Builders), Ltd.	1,224 0	1,267 0
R. Woollaston & Co.	1,115 0	1,140 0
Vigor & Co. (Poplar), Ltd., King-street and Pennyfields, Poplar, E.14	1,025 5	—
(Architect's estimate, £1,260.)		
Stoke Newington — Oldfield-road—		
Chessums, Ltd.	1,590 0	—
W. M. Brand	1,504 10	—
Patman & Fotheringham, Ltd.	1,479 0	—
Charles R. Price	1,468 0	1,524 0
Runham Brown Bros.	1,463 15	1,494 15
N. Lidstone & Son	1,426 0	—
F. Cottrell, Ltd.	1,375 0	—
F. Prater & Son	1,330 0	1,440 0
Stapleton & Sons,	1,299 0	—
The Marvello Co., Ltd., 2a, Prince George-road, N.16.	1,008 10	*1,008 10
(Architect's estimate, £1,225.)		

(Remainder of London.)
(a) 12½ per cent. on prime cost.

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*Sanders & Forster, Ltd. £590 0
Building—
*— Nancekivell 2,066 10
Electric work—
*Lynton & Lynmouth Electric Lighting Co. ..... —

Maidstone.—80 non-parlour houses on the Western-road-Fant-lane site, for the T.C.:—
‡W. T. Burrows £26,231

Manchester.—62 houses on the Seymour-road estate, Clayton, and construction of roads and sewers, for the Housing Committee. Mr. W. F. Platt, Housing Director:—
*Direct Labour £26,073

Manchester.—For installation of electric light at the new Reference Library, Peter-square, for the T.C.:—
*Albert Sudlow & Co., Manchester.

Manchester.—Rebuilding the warehouse in London-road and Auburn-street, for Messrs. E. R. Buck & Sons, Ltd. Messrs. J. W. Beaumont & Sons, FF.R.I.B.A., architects, 24, Brazennose-street:—
*Normanton's Ltd., Manchester.
(Estimated cost, £7,500.)

Manchester.—Supply of ironwork, etc., for the shelters at the Parker-street 'bus station, for the Transport Committee:—
*H. Peers & Co., Bolton.

Manchester.—Sanitary conveniences in Wythenshawe-park, for the Parks and Cemeteries Committee. Mr. Henry Price, A.R.I.B.A., City Architect:—
Mason—*F. & J. Halliwell.
Carpenter and joiner—*F. C. Heys.
Slater—*J. Valentine & Sons, Patricroft.
Plumber—*A. Tinker.
Painter—*J. Ferguson & Co., Salford.
(All of Manchester.)
(Estimated cost, £1,725.)

Manchester.—Recreation room and chapel at Baguley Sanatorium, Altrincham, for the Public Health Committee. Mr. Henry Price, A.R.I.B.A., City Architect:—
Builders—*Fearnley & Sons, Ltd., Salford.
Excavating, draining, bricklaying and concreting, asphalting—*J. H. Billings & Co.
Slating—*Manchester Slate Co.
Plumbing and glazing—*A. Tinker.
Plastering—*J. Garvey.
Painting—*J. Hogg, Ltd.
Ironwork—*H. Peers & Co., Bolton.
(Rest of Manchester.)

Newcastle-on-Tyne.—New shop fronts to the premises of the Public Benefit Co., Clayton-street. Messrs. Clayton, architects:—
*Mason, Ltd., Leeds.

North Shields.—Primitive Methodist Church in Hawkey's-lane, for the Trustees. Mr. W. Stockdale, F.R.I.B.A., architect, 73, Howard-street, North Shields:—
*W. H. Browse, North Shields
(Estimated cost, £10,000.)

North Shields.—Shops and flats in Heaton-terrace. Messrs. Hanson & Sons, architects, 18, Eldon-square, Newcastle-on-Tyne:—
*G. Lock, Field House, North Shields.

Oldham.—Pithead baths at Oak Victoria Colliery, for the Miners' Welfare Committee. Mr. J. H. Forshaw, A.R.I.B.A., architect, Mines Section, Dean Stanley-street, Millbank, London, S.W.1:—
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Plumber—*Richard Crabtree.
Plastering and painting—*Albert E. Knowles.
Asphalte—*Ragusa Asphalte Paving Co., Ltd.
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Joinery, ironmongery and carpentry works—J. Clark & Co., Wallneuk Saw Mills.
Plumber work, etc.—*Hunter & Goldie, Brown's-lane.
Slater work—*Allan Stevenson & Sons, Storey-street.
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*P. & R. Fleming, 29, Argyle-street, Glasgow.

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*Gordon Durham, East Boldon, near Sunderland.

Sheffield.—Church, for the Trustees of the Richmond Wesleyan Reform Church. Mr. E. Turnell, architect, Broomhill:—

*J. Moir, Sheffield.

Shipston-on-Stour.—Reservoir and laying of some 6 miles of 3-in. and 4-in. cast-iron pipe lines and incidental works from reservoir to Halford, for the R.D.C. Messrs. Todd & Watson, engineers, Wellington House, Bennett's-hill, Birmingham:—

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*J. M. Firth & Sons, Todmorden.

Walsall.—Extensions to branch premises and erection of a new warehouse at Walsall Wood, for the Walsall and District Co-operative Society, Ltd., Kenmare House, Bridge-street. Messrs. Jeffries & Shipley, architects, "Kingscourt," Bridge-street:—

*J. R. Deacon, Walsall.

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S. Tennant & Sons, Watton	2,356
W. Peeke-Vout & Son, Watton	2,338
H. C. Tofts & Sons, Attleborough	2,310
H. Bidewell, Wymondham	2,275
*C. Cordy, Hingham	2,185

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S. Tennant & Sons, Watton	1,186
H. C. Tofts & Sons, Attleborough	1,165
J. J. Barber, East Dereham	1,160
C. Cordy, Hingham	1,138
*W. Peeke-Vout & Son, Watton	1,134

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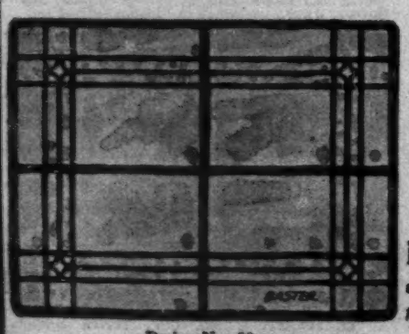

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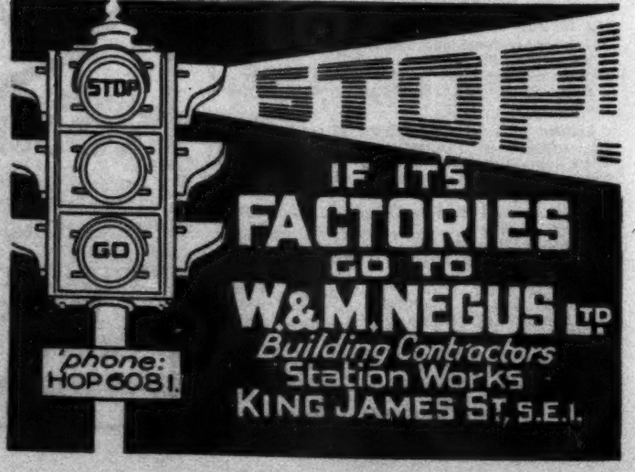
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